AN HBJ PUBLICATION

September 1982/$2.00

WEEDS TREES & TURF

The Journal of Landscape and Golf Course Design, Construction and Care Since 1962

WT&T Profiles Suppliers in Three States

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WT&T

The multifaceted landscape management market consumes a wide variety of products in significant quantities. See page 37 for the 1983 Buyer's Guide.

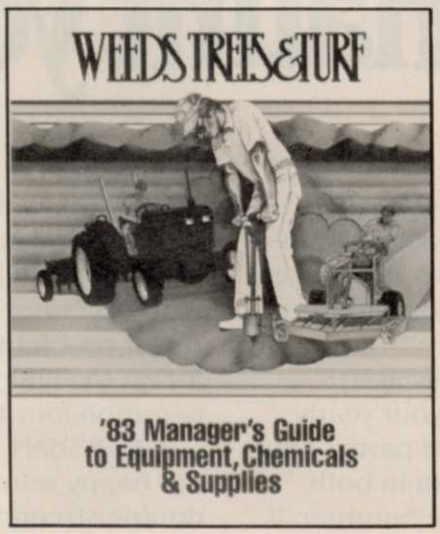
SEPTEMBER 1982/VOL. 21, NO. 9

23
Landscape Management Profile: Dealers and Distributors
New research and four company profiles reveal creative measures taken by distributors to grow and prosper.

27
Beckman Salesmen Keep in Constant Touch With Their Customers
St. Louis turf and irrigation distributor serves its customers by frequent calls and professional advise. This persistence is paying off as Beckman grows.

30
Modern Management Propels 7-Year-Old Irrigation Supplier
Hydroscape has experienced phenomenal growth in a short seven years due to a multi-talented management team and use of modern business tools.

36
Garfield Williamson Doubles Turf Sales In Five Years
New Jersey seed and chemical distributor has tapped the New York Metropolitan area for amazing growth. Not bad for a company started 100 years ago.



37
1983 BUYER'S GUIDE TO EQUIPMENT, CHEMICALS & LANDSCAPE SUPPLIES
Brand names and chemical ingredients have been added to the Buyer's Guide for 1983. Now you know who makes a general type of product as well as a specific brand or chemical. Use this comprehensive directory for planning and buying for next year.

89
Regional Distributor Becomes National Manufacturer
The fourth distributor profile is a prime example of the unlimited potential in the golf and landscape market. Lakeshore Equipment and Supply grew with the market from 1962 to present. Trucks are only part of Lakeshore's future.

92
North American Natives Need Further Study
Doug Chapman suggests we have not explored our own country for plants which fit better into today's low maintenance program.

DEPARTMENTS

Outlook 4
Green Industry News 6
Golf Update 8
Landscape Update 10
Government Update 14
Vegetation Management 90
Products 96
Events 100
Classifieds 102
Advertiser Information 104

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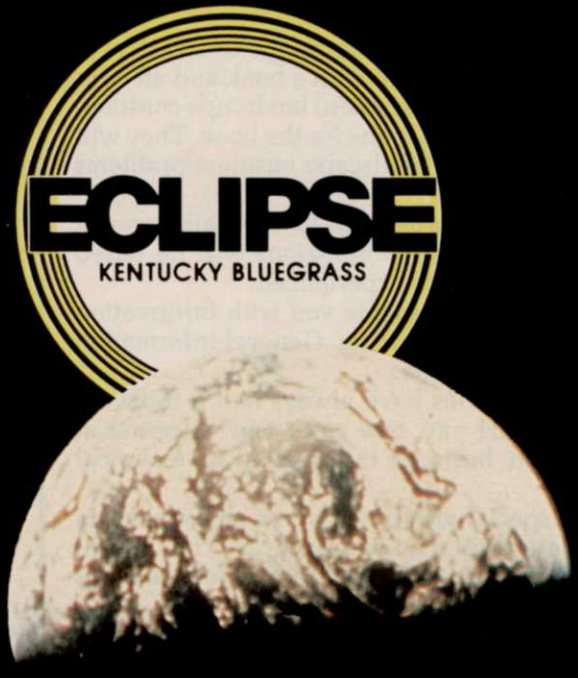

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OUTLOOK

By Bruce F. Shank, Executive Editor

Who really wants or needs management information?

The popularity of management consultants to the landscape industry seems to say many of you want and need management information. The age of computers, volatile interest rates, and government regulations for small business make a basic level of understanding necessary.

Business magazines and general business courses are helpful, but when you have a question about a specific problem to the landscape business, where do you look for an answer? Associations, specialized consultants, your accountant or banker? Probably all of these. So you have four opinions for one problem.

Weeds Trees & Turf and the Associated Landscape Contractors of America have hopefully solved a problem with a book and an educational seminar. More than a dozen successful landscape contractors and consultants are now writing chapters for the book. They will describe their experiences in solving landscape business problems using actual cases and specifications.

ALCA has organized a management seminar for the Dallas area in November. The topics and roundtable discussions will be based upon problems ALCA membership has experienced.

As you can see, the purpose is to provide you with information which is directly applicable to your business. General information you have, specific information you need.

The landscape and golf industries have always had a thirst for technical information about turf and tree care. Our dilemma at WT&T has been how to add business information to technical information.

ALCA has recognized a special group of owners and managers who are looking for business assistance or standards. The current thought is this group needs helpful material written just for it, not bits and pieces mixed with technical material.

Weeds Trees & Turf will continue to provide technical and some business material for your use. The book will confront business topics specifically, with consideration of the technical limitations or requirements out in the field.

Not everyone wants or needs management information. But those who do are growing in number and it's time to meet their needs. Drop me a note if you are looking for more business information. Perhaps you have a problem the book should cover. We've tried to include them all, but the idea is to meet as many of your needs as possible in one book.

My address is *Weeds Trees & Turf*, 757 Third Ave., New York, NY 10017. If you want more business information, we'll get it for you.

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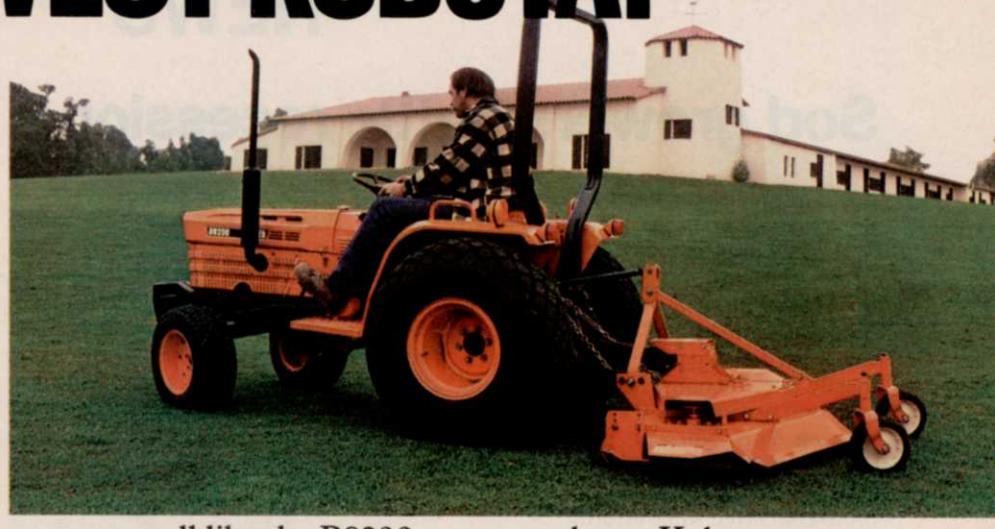

We kept the RPM's low to help keep our new B8200 tractor quiet.

But don't let that quiet exterior fool you. This is a very powerful Kubota.

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But with its heavy-duty hydraulics and a new extra-strength rear axle design, this new 19 hp tractor can handle tougher jobs. Like mowing, tilling, loading and scraping.

Of course, power isn't the only thing the B8200 tractor has going for it.

It also goes in 9 forward speeds, 3 reverse speeds, and comes with handy two-speed rear PTO.

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Landscapers, turf maintenance and rental yard customers all like the B8200. Especially since Kubota's sturdy diesel engine never needs a tune-up.

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For more information write Kubota Tractor Corporation, Communications Department, P.O. Box 7020, Compton, Calif. 90224.

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GREEN INDUSTRY NEWS

Sod growers battle recession

Sod producers are having to improve their management practices to survive in the current market conditions. Representatives of the industry meeting at the American Sod Producers Annual Summer Convention agreed that sod sales are significantly down, due primarily to reductions in new home construction. According to Walt Pemrick of Warren Turf Nursery, producers are adjusting to the downturn by cutting back on overhead costs and making a more concerted sales effort.

According to Ralph White of Southern Turf Nurseries Tifton, GA and president of the ASPA, the smaller operators are under the most pressure. "A business which is as capital intensive as sod is very difficult to justify on 50 acres." White feels that sod producers are becoming more business minded, keeping closer inventories, using more effective means of cost accounting, using more efficient machinery and hiring a higher quality of employee. The tighter market has narrowed the profit margin on sod and made mistakes far more costly than they were a few years ago.

Fourteen teams competed in the Sod Rodeo during the ASPA Convention in Denver CO.

Al Gardner from Greenlawn Sod Co., Inc., of Broomfield CO, commented that the industry is trying to open up specialized markets by developing regional sod grasses from dry land grasses, salt tolerant species and low maintenance varieties. "In the future, water will dictate the types of grasses we produce" stated Gardner. Water shortages will require sod producers to offer sod that is suitable to local climatic conditions, according to many sod growers.

Producers also have the opportunity to open new markets in areas that traditionally use seed rather than sod. Because the price of sod has come down dramatically due to oversupply, efforts are being made to convince both professional and retail consumers to convert from seeding to the use of sod.

According to White, the ASPA is planning its activities with the short term difficulties of its members in mind. Symposiums on water usage and business management are being offered in conjunction with the association's winter convention in San Antonio TX. White feels that the management changes that are being made in the industry as a result of this recession will put sod growers in a very strong position when economic conditions improve.

COMING SOON

National Council for Interior Horticultural Certification Exams, Interior Plantscape Association Convention, Portland, OR Oct 25-27. and Tropical Plant Industries Exposition, Coconut Grove, FL Jan. 20-22. The final Step in the NCIHC certification process, the exams contain five sections: horticulture, business, maintenance, design and plant identification. To find out more about the certification process Contact NCIHC, One Mannions Lane, Danbury CT, 06810, 203/792-6085.

Turfgrass Symposium, Oct, 20-21, Columbus, OH. Focusing on turfgrass fertilization, the symposium will feature talks in on topics such as fall fertility, responses of turf to nitrogen sources, rates and timing of nitrogen, and the effects of potassium and phosphorus in turfgrass maintenance. Contact Dr. B.G. Joyner Plant Diagnostic Lab, Chemlawn, 6969 Worthington-Galena Rd., Suite L, Worthington, OH 43085 614/885-8367.

SEED

Davis Rogers Investment buys Vaughan-Jacklin

The Vaughan-Jacklin Corp. has agreed to sell its business and assets to the Davis Rogers Investment Group. The Vaughan-Jacklin board of directors was unanimously in favor of the proposed purchase agreement and has agreed to sign a voting and proxy agreement for 33% of the outstanding shares of Vaughan-Jacklin.

Davis Rogers is offering $13.75 per share for Vaughan-Jacklin stock, less the expenses for the transaction. The purchase price is also conditional upon the net worth of Vaughan-Jacklin remaining the same as their preliminary estimate. After the transaction, Vaughan-Jacklin intends to make an offer to each shareholder giving him the option of redeeming his shares for cash.

Vaughan-Jacklin is a distributor, manufacturer and grower of professionally used horticultural products and home garden supply items. The Davis Rogers Investment Group which owns and operates substantial agricultural businesses and real estate. David Rogers presently owns and runs companies involved in growing and distributing sod, raising row crops and ranching.

Presenting the aerators designed in the belief that all grounds are not created equal.

Some grounds are flat. Some are not. So how can you expect one aerator to work equally on both?

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The Tracaire's 12-tine wheels are held in perfect horizontal alignment for uniform aeration on athletic fields and other flat areas.

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Both aerators give you a wide 6' swath and a choice of interchangeable tines (coring, slicing and open spoon) to match your soil conditions. And either can be equipped with a heavy-duty dragmat for breaking up cores.

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GOLF UPDATE

USGA forms research committee

The United States Golf Association has formed the Turfgrass Research Committee. "In time, the research compiled by this committee could lead to major breakthroughs in turfgrass maintenance," said USGA Senior Executive Director Harry Easterly Jr.

The long-term program will be a multi-million dollar undertaking. The primary purpose of the program is to develop minimal maintenance turfgrasses that are water conserving, salt tolerant, disease and insect resistant and will provide excellent playing surfaces. One of the major efforts of the committee will be to form a computerized reference source for all turfgrass research literature. This will bring together every piece of literature dedicated to turfgrass research from throughout the world.

The committee will also fund overseas expeditions which will enable researchers to gather grasses from all over the world. An expedition for plant material search in Asia and South Africa has already been authorized.

Owners form independent group

A new golf industry trade association, the Golf Course Association (GCA), has been formed by the owners of privately-held public golf courses. Directors of the National Association of Public Golf Courses voted in April to become an independent group and adopt the new moniker, "Golf Course Association." NAPGC had been an affiliate of the National Golf Foundation for the past five years.

GCA's objective is to grow quickly as the voice for the owners of tax-paying public golf courses and earn a position as one of the major independent forces within the golf industry, according to Bailey Trull, owner of Trull Brook Golf Course, Tewksbury, MA. The association will represent public course owners on industry and governmental issues and is envisioned as an important business and management education resource for the daily-fee segment of the golf industry.

GCA is beginning with a membership of approximately 150 golf course owners. As of January 1, 1982, NGF reports that there are 5428 daily fee golf courses in the U.S. GCA predicts a membership growth rate in excess of 200% annually over the next several years. Michael Rippey of Smith, Bucklin and Associates has been named executive director of the association which is headquartered in Chicago and has offices in Washington, DC. Regular membership dues are $175 for nine-hole courses and $250 for courses with 18 or more holes. Companies which provide products or services to GCA member courses may enroll as associate members for $200. Charter memberships are being offered until the Golf Course Association's 1982 Annual Meeting, December 1-4, at Arnold Palmer's Bay Hill Club and Lodge, Orlando, FL.

NEWS *from page 6*

INTERIOR

California announces national interior show

A California publisher has announced plans for a National Interior Landscape Exposition to be held at Disneyland Hotel Convention Center, Anaheim, for June 1983.

Florida has been the center of the interior foliage market since its creation, although interior landscapers are now in business throughout the U.S.

Hester Communications, publisher of *Western Landscaping News*, hopes to attract thousands of interior plant specifiers to Anaheim as well as hundreds of exhibitors. Hester currently coordinates the American Pavilion at the International Bicycle and Motorcycle Exhibit in Cologne, Germany.

A panel consisting of representatives from the Associated Landscape Contractors Association, the Interior Plantscape Association, the American Society of Landscape Architects, and interior landscape firms is helping Hester with show planning.

NURSERY

Nurserymen hit the beach (in Hawaii)

"Oahu" means gathering place in Hawaiian and the nurserymen did just that as they flocked to Honolulu, HI, to attend the 107th Annual Convention of the American Association of Nurserymen.

NLA President Gerald Harrell

The convention ran five days and was chock full of information for the sundry affiliated associations of AAN. Tours and seminars were held for nurserymen and National Landscape Asso-

Continued on page 10

Get tough weed control that's easy on plants!

When you ask yourself how you can get long-lasting control of weeds in ornamental plants, trees and shrubs, what will your answer be?

With Devrinol® herbicide, of course.

Because you know Devrinol handles the tough weeds. You know it to be the one that lasts through the whole season. Why? It resists leaching—through heavy rains, even frequent irrigations.

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See your distributor now for Devrinol. Follow label directions. Stauffer Chemical Company, Agricultural Chemical Division, Westport, CT 06881.

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LANDSCAPE UPDATE

Maintenance pegged at 19%

According to the National Landscape Association's latest Management Survey, landscapers reported that maintenance services provided 19% of their total business. Regionally, the Northeast reported the highest percentage — 26%, while the Great Plains region came in at 12%.

Of the 138 firms that participated in the survey, 97% performed pruning as part of their maintenance services. Other services include: mulching — 95%, fertilizing — 93%, insect and disease control — 80%, chemical weed control — 75%, lawn renovation — 70%, planting for seasonal color — 66%, mowing and edging — 57%, manual weed control — 51%, watering — 40%, litter and trash removal — 33%, snow removal — 25% (Northeast: 34% and Great Lakes: 34%), and sweeping parking lots — 19%.

In chemical weed control, 70% indicated they used selective herbicides, 52% indicated they use non-selective herbicides, and 11% use aquatic herbicides.

Late charge most popular collection practice

A recent management survey by the National Landscape Association concluded that 85% of the members responding assess late charges to encourage prompt payment of accounts. Regionally, the responses ranged from 62% in the Southwest to 93% in both the Great Lakes and Great Plains. The average monthly assessment was 1.7%.

Local attorneys were reported to have been used by 65% of the firms. Small claims courts have been used by 55% of the respondents. Mechanic's liens and collection agencies were used at one time or another by 37% of the firms, often as a last resort.

ALCA launches management division, show, and book

The Associated Landscape Contractors of America Board voted in July to launch a Landscape Management Division at a meeting and educational seminar in the Dallas area in November. The Division will have its own set of officers and specialty staff at ALCA headquarters in McLean, VA.

Allen Smith, ALCA executive director, said both upper and middle managers of landscape companies will be invited to the meeting which will feature sessions on marketing, financial management, job costing, and roundtable discussions.

The new division is cooperating with Harcourt Brace Jovanovich Publications on a management book, *Cost Effective Landscape Maintenance*. to be published this winter. ALCA and HBJ are responding to requests for more information on business management of the landscape firm. The book will be written by successful landscape businessmen, university instructors, legal and business consultants, and HBJ editors. Maintenance standards will also be included.

NEWS *from page 8*

ciation members, while many other groups held their annual business meetings. Participating associations included: Garden Centers of America, Wholesale Nursery Growers of America, Horticultural Research Institute, National Association of Plant Patent Owners, American Nurseryman's Protective Association, Nursery Association Executives, Mailorder Association of Nurserymen, and All-America Rose Selections.

The interaction between Hawaiians and mainlanders was one of the most interesting aspects of the convention. Both groups took every opportunity to explore each other's practices and techniques and were genuinely interested in finding out how nurseries and landscaping were handled back home. Six busloads of conventioneers turned out to tour native Hawaiian landscapes, which included the Royal Hawaiian Shopping Center, Honolulu International Airport, Spaulding Estate, and the East-West Center of the University of Hawaii.

The convention was very business-oriented, with the majority of the seminars devoted to advertising, marketing and business practices. A particularly interesting seminar was given by Glen Asakawa of Presidio Garden Center, San Diego, CA. He gave an overview of the interior landscaping market and then explained the reasons why his company was not expanding into that area. (He explained that the market is good but the timing was wrong for his firm.) Seminar attendees were well-rewarded for the hours they spent inside the convention hall (away from tempting Waikiki Beach).

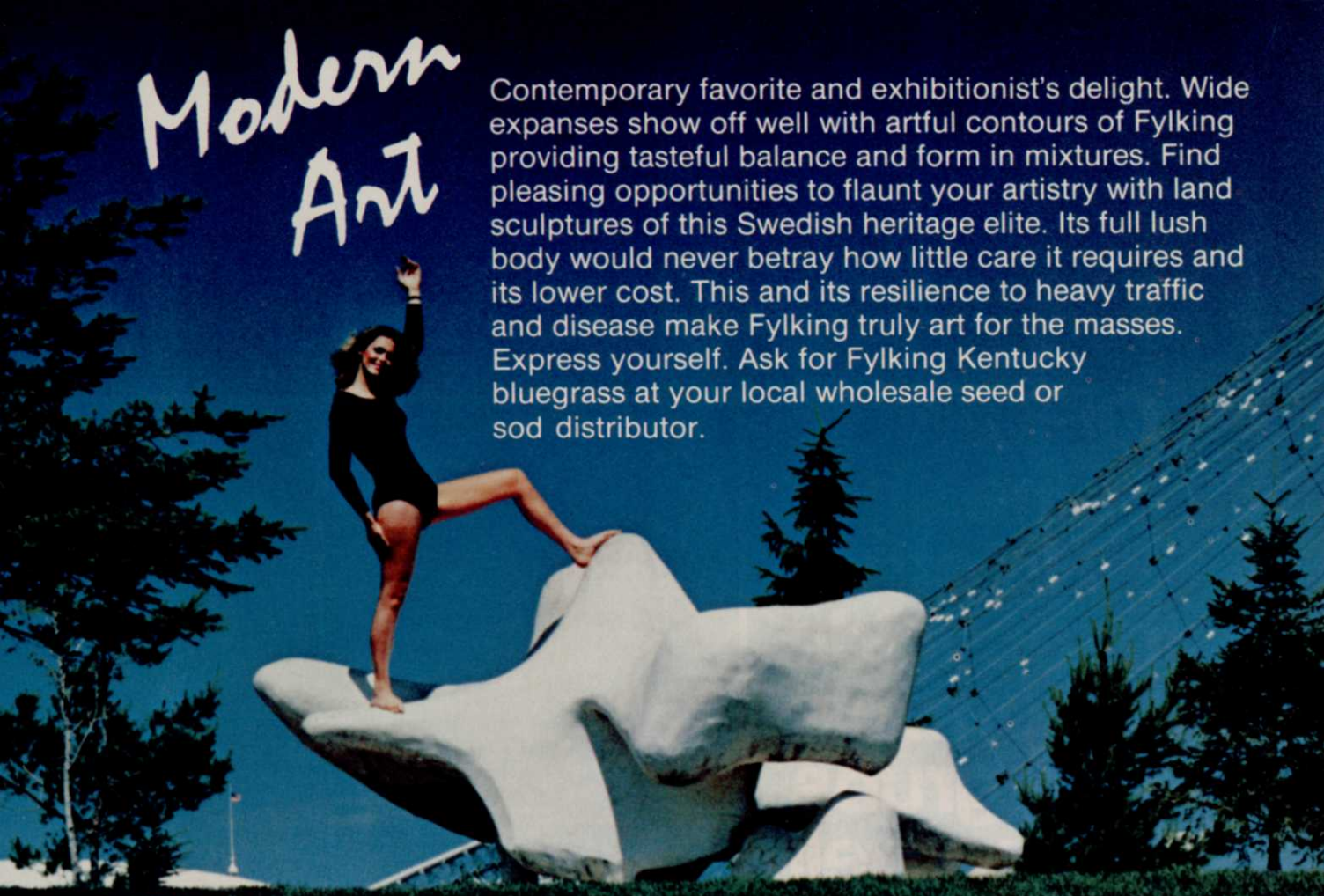
On the business end, S. Kent Langlinais, owner and manager of Kent's Nursery, Youngsville, LA, was elected AAN president and R. Jerry Rosso, secretary and treasurer of Julius Rosso Wholesale Nursery Co., Seattle, WA, was elected vice president. R. J. Hutton, Conrad-Pyle Co.; David Farley, Farley Bros. Nursery; and Richard Aldridge, Aldridge Nursery; were named to the AAN board of directors.

TURF

Lawn Institute names Roberts

The Lawn Institute confirmed Dr. Eliot Roberts as the new director at its annual meeting in Dallas, TX. He is leaving a position as professor of soil science at the University of Rhode Island, where he was supervising programs

Continued on page 14



Contemporary favorite and exhibitionist's delight. Wide expanses show off well with artful contours of Fylking providing tasteful balance and form in mixtures. Find pleasing opportunities to flaunt your artistry with land sculptures of this Swedish heritage elite. Its full lush body would never betray how little care it requires and its lower cost. This and its resilience to heavy traffic and disease make Fylking truly art for the masses. Express yourself. Ask for Fylking Kentucky bluegrass at your local wholesale seed or sod distributor.

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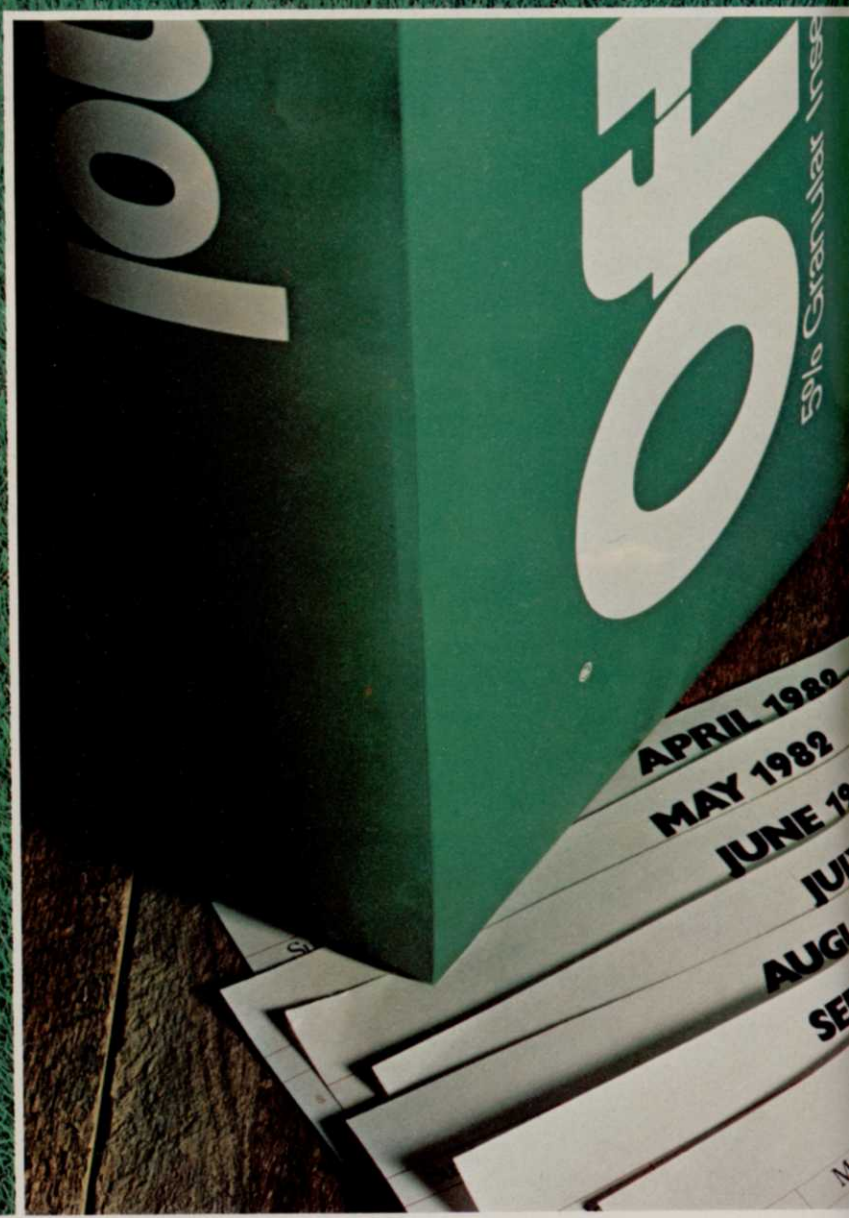
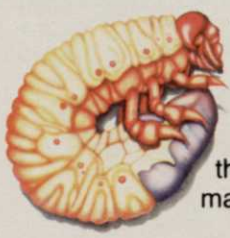
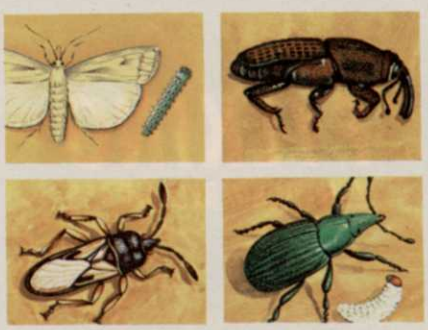


The use of OFTANOL for turf pest control is registered in many states. Check with your state extension office for registration information.



One-shot white grub control with OFTANOL represents a dramatic breakthrough in turf management.

With a single application at the recommended rate, OFTANOL controls white grubs through the entire season.



But that's only part of the story.

Properly timed, that same application can also control major insects such as billbug, chinch bug, Hyperodes weevil and sod webworm.

For example, apply OFTANOL for the first infestation of surface feeding insects. You'll establish season-long white grub control at the same time.

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And it doesn't stop there!

Or, treat for Hyperodes weevil in the spring. You'll also receive white grub control for the entire season.

Other insecticides requiring multiple applications can't provide this performance and flexibility.

OFTANOL has other advantages, too: won't tie up in thatch . . . resists leaching . . . doesn't require watering in.

No wonder OFTANOL is the new insecticide turf managers are asking to learn more about. OFTANOL can fit into your insect control program, too. Ask your turf chemicals supplier for this free OFTANOL FACTS brochure.

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Don't trust your turf to anything less.

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GOVERNMENT UPDATE

by William Hoffman

Five airports on beetle watch

The USDA is requiring five airports to inspect departing planes for hitchhiking Japanese beetles to prevent further spread of the pest. The airports are located in Delaware, New Jersey, Ohio and Maryland.

Beetle numbers in these areas are extremely high according to USDA. Gary Morehead, a USDA Animal and Plant Health inspector, said airlines must use mechanical or chemical means to keep the beetles off the aircraft.

The airports affected are Dover Air Force Base, Del.; McGuire Air Force Base, N.J.; Port Columbus Airport, OH; Rickenbacker Air Force Base, OH; and Baltimore-Washington Airport, MD.

Fire ant panel offers little help

The imported fire ant symposium sponsored by the U.S. Department of Agriculture and the Environmental Protection Agency offered little immediate help to EPA in resolving the control program for this insect.

The fire ant has now infested almost 1/4 of a billion acres in nine states from North Carolina to Texas. A panel on the social and economic factors relating to the fire ant recommended that an unsubsidized relief program would be the most feasible with property owners paying for the chemical treatment. Any program in which the federal or state government would participate would be so vulnerable to funding, legal, and management problems that it would never become operational.

The panel felt strongly that the fire ant problem should be considered a public health problem and not a threat to agriculture.

Several chemical companies reported on new products for the control of the fire ant. Most of the promising are of the biorational types like insect growth regulators and could be the most environmentally acceptable and safe. However, EPA representatives warned that even these compounds would have to be completely evaluated before being registered by the Agency. It would appear that the containment of the imported fire ant is years in the future.

Monsanto sues EPA for release of Roundup data

Claiming irreparable damage and contempt of a District Court order, Monsanto Company is suing EPA for releasing trade secret data on glyphosate, the primary component of Roundup, to a Washington, D.C., law firm.

Monsanto claims EPA did not follow regulations requiring 60-day notice before release of data, nor did it comply with a pretrial order from the U.S. District Court for Eastern Missouri.

The purpose of the law firm's request for data is unknown. The information released consisted of material used to support the registration of Roundup.

NEWS *from page 10*

studying the use of plants in disturbed environments.

Roberts did his undergraduate work at the University of Rhode Island, then received his PhD in soil and plant physiology from Rutgers University. He went on to become a professor at Iowa State University and then chairman of the ornamental horticulture departments at the University of Florida and later at University of Rhode Island.

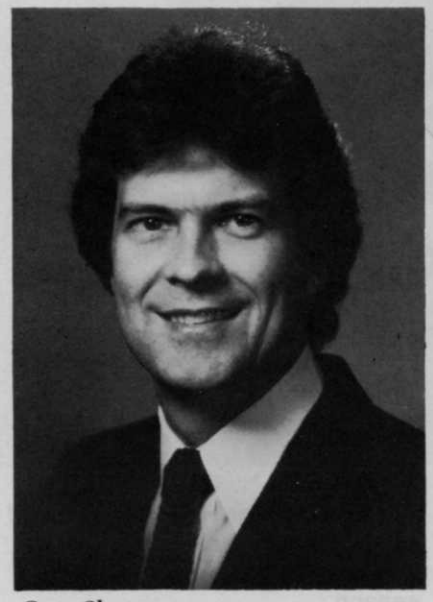
Roberts is succeeding Dr. Robert Schery, who is retiring after 25 years as the director of the Institute. The new location for the staff offices of the Lawn Institute will be P.O. Box 108, Pleasant Hill, TN 38578.

The board of the Institute was also elected at the Dallas meeting. Norman Rothwell of Rothwell Seeds Ltd. in Canada was elected president, Bob Peterson of E.F. Burlingham & Co. in Oregon is vice president and Robert Russell of J & L Adikes in New York is secretary/treasurer.

EQUIPMENT

Sloan replaces West at Cushman/Ryan

Gary Sloan has joined OMC Lincoln's advertising and marketing staff in Lincoln, NB. He succeeds Scott West who was promoted as a marketing manager for the company's West Coast Operations.



Gary Sloan

Sloan was promotion manager for Rickel Mfg. Corp., Salina, KS, prior to joining OMC. He will manage marketing of the Cushman and Ryan lines of turf equipment.

IRRIGATION

Cal Poly to offer Irrigation curriculum

California Polytechnic University, Pomona, will offer an Irrigation Design curriculum beginning this September. Cal Poly Professor of Horticulture Kent Kurtz said the University worked closely with the American Society of Irrigation Consultants and many of the irrigation manufacturers in the area to develop the new coursework.

The four-year curriculum will be implemented by Kurtz, Dr. Joe Hung, and Professor James Degen. Students will study turfgrass management, landscape contracting, golf course management, plant materials, soil science, and drainage in addition to the irrigation courses.

For more information on the new program, contact the Ornamental Horticulture Dept., Irrigation Design Studies, California State Polytechnic University, 3801 W. Temple Ave., Pomona, CA 91768.

EQUIPMENT

Jacobsen hosts student seminar

The Jacobsen division of Textron sponsored the College Student Turf Seminar for 48 students of agronomy and turf at its headquarters in Racine, WI. The seminar presented information of grounds care techniques such as basic management, turf equipment maintenance and field experience.

According to the company, the turf seminar remains the first and only joint company-distributor sponsored program of its kind. "Our Turf Seminar, now in its 15th year, has always offered

Students participating in the Jacobsen Turf Care seminar received hands-on experience in many aspects of equipment maintenance.

college students a premier chance to learn about the latest turf care advancements," said Ned Brinkman, general sales manager.

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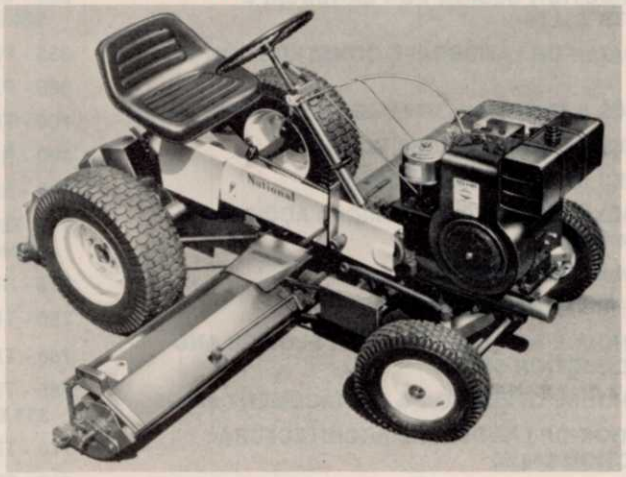

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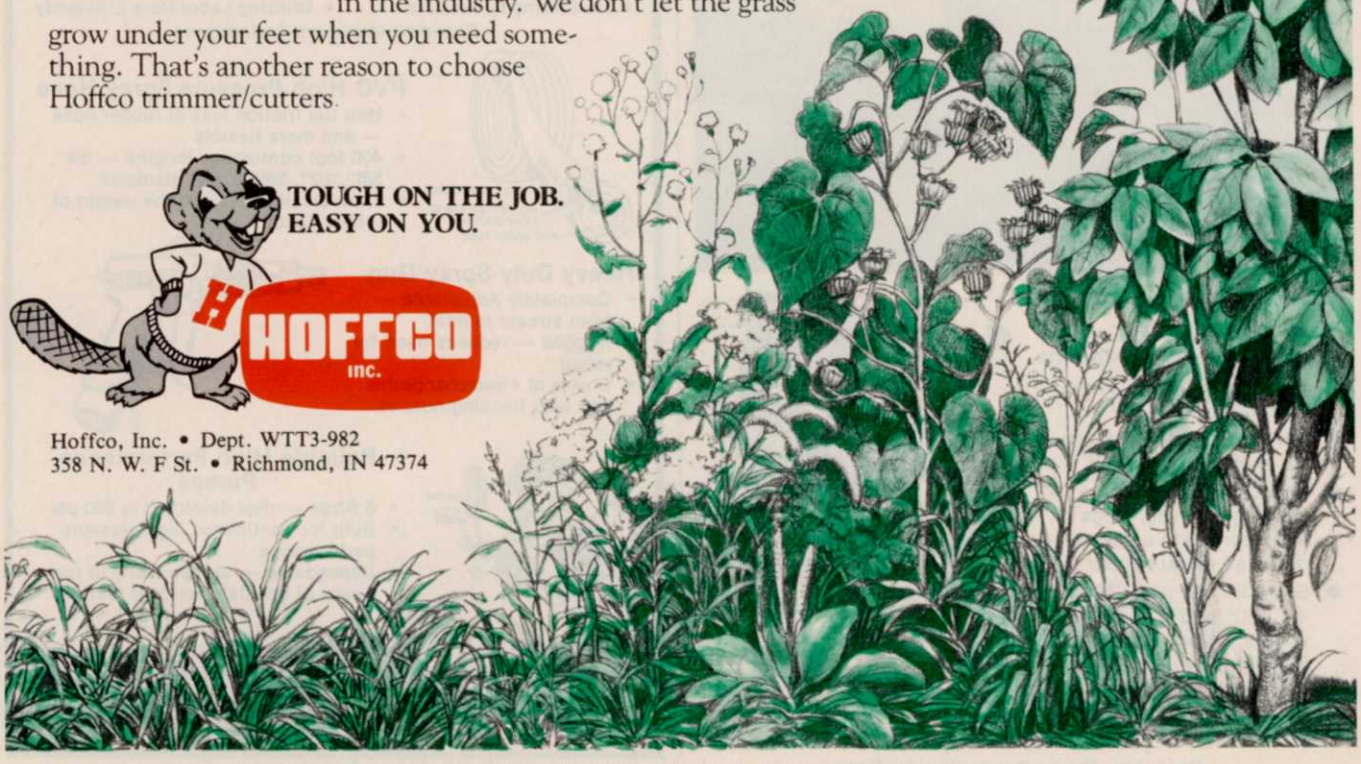

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lapping of reels, preventative maintenance, budgeting and life cycle costing, safety systems and energy conservation. Students also gained hands-on experience operating a wide variety of grounds care equipment during a field day.

LANDSCAPE

Consultant organizes contracting data

Estate Landscape Consultants, the creation of Lon Monroe and Tim Johnson, is a new service that offers clients complete landscape information. The Santa Barbara, CA firm is becoming a clearinghouse on computer that contains information that can be used to administer site planning, construction schedules, materials selection pricing and availability and sources for specialized solutions to specialized landscape problems.

"We work with contractors and owners of the sites, often managing the job as well as providing the necessary information," stated Johnson. The company works on properties from 5 to 3000 acres in size.

Monroe and Johnson are also developing an extensive list of consultants who can advise on specialized projects. Associate consultants include horticulturist, Jerry Sortomme; pest adviser, Bruce Craig; and arborist Bruce Van Dyke. The data in the computers at this point is the most extensive is expanding to a national scale and have recently completed a several thousand acre project the Sycamore Valley Ranch and Walden Condominiums in Aurora, OH.

LANDSCAPE

Environmental Industries Names Rose EVP and CFO

Environmental Industries has placed David Rose in the newly created position of executive vice president and chief financial officer. Rose joined the company in 1972 and has served as the vice president and chief financial officer since 1974.

A Certified Public Accountant, he will be responsible for all accounting and financial policies as well as general managerial activities for the company and its four subsidiaries: Environmental Care Inc., Valley Crest Landscape, Valley Crest Tree Company and

David Rose

Western Landscape Construction, which are involved in landscape construction, landscape maintenance and tree growing. The company reported sales of $60 million in 1981.

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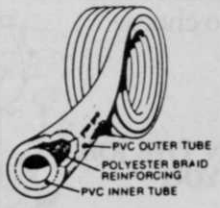

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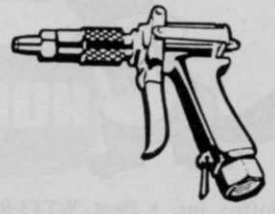

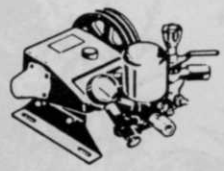

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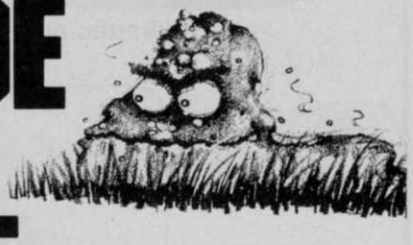

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Overseeder III Mix (Formerly Medalist North Mix)	Fairways, tees, cart paths, wear areas	Long term quality in high traffic areas. Clean mowing and disease tolerant.
Premium Sod Blend	Commercial sod producers	Fast establishing, exceptional dark green color, shade tolerant, superior disease resistance.
Special Park Mix	Parks, commercial developments, lawns	Low fertility tolerance, shade tolerant, adapts to wide range of soil types.

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LANDSCAPE MANAGEMENT

PROFILES 1982
Dealers and Distributors

WEEDS TREES & TURF

Research in LANDSCAPE MANAGEMENT

DISTRIBUTORS PICK GOLF/LANDSCAPE OVER RETAIL, FARM

By BRUCE F. SHANK

Finding the primary distributors of professional golf and landscape supplies in the United States is not easy. They are among a melting pot of retail garden centers, farm suppliers, general chemical distributors, outdoor equipment dealers, irrigation distributors, and arborist suppliers totally more than 40,000.

Finding the 1,500 businessmen who specialize in professional golf and landscape supplies may be so difficult as to discourage development of products by new manufacturers while protecting current manufacturers. The melting pot is a mixed blessing.

A random sample of *Weeds Trees & Turf*'s 1,400 distributor readers in June has provided some needed insight into their business. The profiles following this report show the variety of distributors serving you and the ingenuity they use to meet your needs.

By far the most prevalent type of product sold by professional distributors is chemicals. Offering chemicals is a practical investment and a service requested by equipment and plant customers. The one-stop approach to marketing professional products is popular, with the possible exclusion of large equipment, plant material, and irrigation supplies. These three items require either special investment or knowledge to sell.

Landscape and golf equipment is sold by half the distributors polled. Irrigation supplies are sold by 40 percent of the respondents and plant material by 32 percent. Large equipment selling requires a service department, replacement parts, and a significant inventory expense. Irrigation distributors require system designers, a specialized sales force, and a significant inventory. Wholesale nurserymen require yards, specialized equipment, and a maintenance staff. To become a distributor of these professional products a commitment beyond handling and sales is required.

More than half the distributors polled sell turf seed. The advent of improved turfgrass cultivars has "professionalized" the seed business and put it a notch above selling common varieties as was the case in the 50's and early 60's.

Twenty percent said they sold farm equipment. Very large equipment, such as tractors, large trenchers, and small dozers are still the domain of farm equipment and construction equipment dealers. Highly sophisticated mowers for golf courses and landscape maintenance are best sold by turf equipment dealers with their greater interest in our market.

The only way to recognize the key distributors of professional products for the golf and landscape markets is by their target customers. Therefore, we asked them a series of questions on primary and secondary types of customers.

What we found made sense according to the history of the market, but the results indicated a lag in reaction by distributors to serve newer, rapidly growing markets such as lawn care and contract landscape maintenance.

Golf course superintendents, park and school maintenance personnel, and the general public were listed as primary customers by nearly half the distributors. These were the first strong markets to lawn and garden product distributors in the 50's and 60's.

The postwar housing boom brought a tremendous interest by Americans in their own yards and the outdoors in general. Manufacturers such as Toro, Jacobsen, O.M. Scott, and Mallinckrodt first reacted to the attractiveness of the outdoor landscape market in the 20's and 30's. Golf boomed in the 20's as well. The Great Depression and World War II put a damper on the market, but not the research.

TABLE 1.
Distributors Rate Types of Customers.

Type	Primary	Secondary	Not Customer
Golf Superintendent	49%	32%	18%
Parks/Schools	53%	38%	9%
General Public	46%	23%	30%
Landscape Contractor	26%	60%	13%
Lawn Care	35%	49%	15%
Farmers	30%	20%	49%
Condominiums	17%	62%	20%
Irrigation Contractors	15%	18%	66%
Airports	15%	39%	45%
Shopping Centers	13%	34%	52%
Arborists	11%	28%	60%
Sod Producers	9%	41%	49%
Estate Gardener	9%	42%	50%
Hotels/Resorts	5%	52%	41%

When the cloud lifted in the 50's the market took off again with many new products. The Baby boom put new pressure on government for parks and schools.

In the 60's the golf and landscape markets had arrived and many distributors recognized a need for local suppliers to serve them. The formula then, and still today, was golf/schools/parks/homeowner.

The 60's and 70's helped distributors with the growth of tree care, sod production, and landscape contracting. The gardener was slowly being replaced by commercial services who needed a local source for their supplies.

The installation of irrigation systems increased significantly in the period due primarily to golf and parks. The desire for summer turf color in cooler parts of the country made irrigation systems the state of the art. Beginning with simple, quick coupler systems, the market expanded into mechanical and then solid state control with many zones. Regional manufacturers of irrigation supplies grew into national corporations which needed local distributors. Expanding population in the Sun Belt and West expanded that already established market.

According to the survey, 35 percent of the distributors consider lawn care businessmen primary customers and 26 percent consider landscape contractors primary customers. Thirty percent consider farmers primary customers still.

We also asked the distributors about secondary customers and those who were not customers. The significance of lawn care and contract landscaping were bolstered by secondary ratings of 49 percent and 60 percent respectively. Distributors recognize their importance but still see the older, established markets as their bread and butter.

Off the charts, but still valued customers, are condominiums, airports, arborists, estate gardeners, and shopping centers. See Table 1 for more information.

Out of all the various submarkets in our industry, distributors saw landscape contractors, lawn care applicators, condominium staff, and the general public as the markets increasing in sales. Golf superintendents, estate gardeners, and hotels were seen as the groups just behind the leaders. The markets seen as having plateaued were sod producers, airports, and shopping centers. See Table 2.

TABLE 2.
Increase and Decreases in Business by Customer.

Type	Up	Down	Same
Landscape Contractor	64%	9.5%	26%
Lawn Care	65%	8.0%	27%
Condominiums	62%	5.4%	32%
General Public	62%	12.0%	25%
Estate Gardener	54%	0.0%	45%
Golf Superintendent	50%	2.5%	47%
Parks/Schools	48%	12.0%	39%
Irrigation Contractors	50%	5.0%	45%
Farmers	45%	16.0%	38%
Arborists	42%	0.0%	57%
Hotels/Resorts	44%	4.0%	52%
Airports	33%	11.0%	55%
Shopping Centers	33%	4.8%	61%
Sod Producers	29.4%	17.6%	53%

Overall, distributors feel strongly (85 percent) that existing manufacturers adequately serve the market in terms of needs and quality. Just under two thirds feel manufacturers respond well to the needs of their customers.

Distributors anticipate their sales to fall in 1982 after a 13 percent increase in 1981. The average sales volume of our sample for 1981 was $2.7 million. The most common figure given was $1 million. The median was $1.2 million.

Only 15 percent reformulate chemicals for private labels. The reasons for establishing private labels were given as greater profit and better control. Fourteen percent of the distributors owned a landscape service company in addition to the distributor business. The most common type of service was lawn care with industrial weed control as a weak second.

Buyer cooperatives represent a temporary threat only according to the distributors. Only eight percent felt it would cause any permanent damage, even though 40 percent believe such coops are a threat to part of their sales.

Since many distributors also serve the general public and farmers, we asked them to pick which major market is growing the fastest. They selected the golf and landscape market as number one, followed by retail and farmers.

The only thing distributors might hope for is more help from manufacturers with promotion. Nearly 40 percent said they'd like more assistance in promotion. Currently, distributors rely on the following for promotion:

Sales Force	63%
Local Shows	57%
Yellow Pages	55%
Direct Mail	39%
Regional Publications	35%

Forty percent of the distributors said they had reduced inventories and increased reliance upon delivery from the manufacturer. Slightly less than half said their equipment service department is doing a greater business. The same number reported an increase in brand loyalty.

Distributors are adding educational seminars in more than two thirds of the cases reporting. Expanding regional show participation and increasing sales promotion are reported by more than 60 percent.

More distributors report a decrease in delinquent accounts than an increase. No one gave any indication of general dissatisfaction with the golf and landscape market. They appear glad to have specialized as they have. **WTT**

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BECKMANN TURF AND IRRIGATION PROVIDES PRESENT AND FUTURE NEEDS IN THE ST. LOUIS VICINITY

Despite the growing cost of sales calls, Bruce Beckmann, president of Beckmann Turf and Irrigation Supply of Chesterfield, Missouri, expects his sales staff to make seven to eight calls per day when they are not giving demonstrations.

These aren't always sales calls, they are service calls too. "We make frequent calls on the customers," Beckmann says, "to develop a rapport and gain their confidence so that we can recommend products to fit their long-term growth."

To Beckmann, distribution is a one-on-one business. With direct mail advertising and a new catalog that goes out to 1800 landscape managers each year, it is the personal contact that is most productive. "It is probing by the salesman that determines what the customer's needs are." said Beckmann. "Once we have an exchange of ideas we can begin to help satisfy his needs by demonstrating equipment in order to determine its efficiency in comparison to what he already has."

On the day the *Weeds Trees & Turf* visited Beckmann Turf and Irrigation, one salesman had just returned from a demonstration of a Dedoes aerator for the superintendent of a 27-hole municipal golf course. During the course of the demonstration the salesman and superintendent figured out that the Dedoes would cut 75 man-hours from the traditional method of aeration. To Beckmann's sales staff each demonstration is an opportunity to sell.

Once a piece of equipment is sold, Beckmann then concerns itself with three other phases of the transaction: setting the equipment up, servicing it, and educating the customer to get maximum efficiency from it.

In effect, many sales calls are an offshoot of the deep commitment Beckmann feels towards its customers. "The service end of the business is as demanding as any part," said Beckmann. "Some customers don't have the expertise to continually update their specialty equipment to achieve the productivity demanded by their budgets." He added that while those calls are expensive to make, it is important to satisfy the needs of the customer in order to grow with his maintenance program.

Some recent trends have reinforced Beckmann's philosophy of customer commitment, particularly with irrigation and specialty equipment. Beckmann has watched the distribution of chemicals become the domain of specialists whose expertise lies in low pricing.

Many distributors are shrinking their lines and expanding their marketing region as shipping methods become more sophisticated. Beckmann suggested with products that require little service or follow-up, price is often the definitive factor. Beckmann carries a full line of chemicals and seed as a service to his customers, but there is clearly a concentration on irrigation and specialty equipment.

An important reason for this concentration is the industrial market's need for better-manicured turf.

> It can take 7 months to more than a year before a client can get final approval for a piece of equipment.

More and more landscape contractors are serviceing the industrial market," said Beckmann. "Condominiums, apartment projects and industrial complexes are being maintained more like golf courses." While 10 years ago it was accepted that turfgrass had dormant periods, today turf is expected to be maintained 12 months a year.

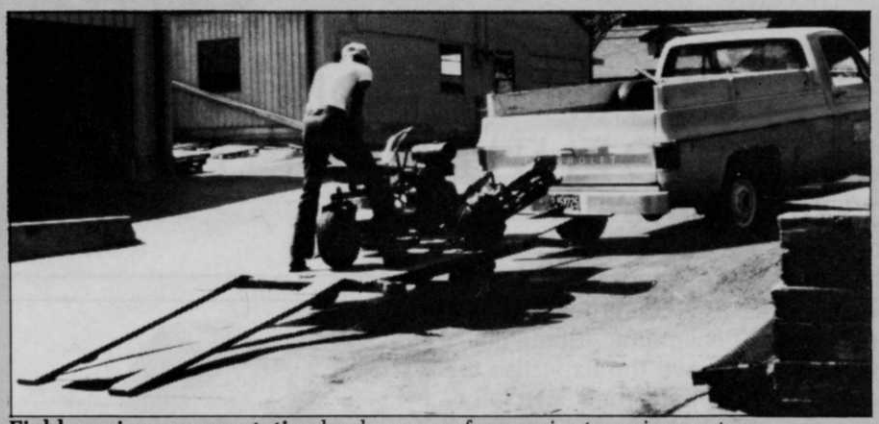
President Bruce Beckmann.

Although Beckmann's territory lies smack in the middle of the transition zone with its four extreme seasons, the attitude is "it can be done." "With," Beckmann added, "modern irrigation and maintenance equipment, improved chemical products and the ability to apply those products with the new equipment."

Being in the transition zone causes the grass to have two heavy growth periods—March to June, and September to November. Beckmann sales would peak in spring and fall and drop in summer and winter in the past. The growth of the company's irrigation business however, has levelled out the summer trough and extended the fall peak into December or as late as installations are still feasible. Chemicals move well in the summer, largely because the weather has the cool season grasses under stress.

"Budgets at schools and government agencies come due in June and July," said Beckmann. "Most golf course budgets come due in the first quarter. Equipment is now selling on a nine to ten month basis, not just in the spring."

Beckmann's irrigation division has been a prime beneficiary of the trend towards better turf. By his estimate. 70% of keeping good turf is adequate water supply. "For the



Field service representative loads mower for repair at service center.

first five years (of the irrigation division) we had to convince the commercial/industrial market that good turf was attainable," said Beckmann. "Now that it's established, they are opting for improved watering systems to maintain the turf." Manning the irrigation division is a sales manager, an architect/engineer and a designer/contractor.

In the off-season Beckmann sponsors training meetings for selected contractors. They involve marketing, design, advertising, promotion, service, and application of equipment. The residential and light industrial markets have grown significantly over the past six years, according to Beckmann. Improved irrigation systems are increasingly being specified for athletic field and golf course renovations, although new golf course construction has been off.

In line with most successful businessman, Beckmann sees the tight economic conditions as an opportunity for his staff to exhibit their expertise and commitment to their customers. Beckmann stresses the "life cycle cost" of equipment, not simply the purchase price. "The cheapest piece of equipment is often short-lived and requires high maintenance," noted Beckmann. "Turfgrass managers can't afford down-time." With labor costs being such a large part (50-60%) of maintenance budgets, superintendents are opting for cost-efficient equipment.

"Toro equipment is the best engineered equipment I have ever seen in the industry," exclaimed Beckmann. "They have taken a leadership position. About 10 years ago they redesigned their equipment and came out with a life cycle and low cost that the industry needs."

"Our specialty equipment is designed for broad applications in maintaining turfgrass," said Beckmann. "To justify the cost of the equipment, you can point to the number of jobs it can perform. We're selling 'greater versatility.' "

Beckmann started out in his family's lawn and garden supply company. It was the model of a two-step distribution system, i.e., receive it in a box and send it out in a box. Accordingly, it was a lot easier to service customers. "The transition from two-step to one-step distribution was difficult because of the increased demand for service after the sale," said Beckmann. "If a customer buys equipment and doesn't use it properly, all the investment in time and service goes down the drain."

Equipment is now selling on a ten-month basis, not just in the spring.

Beckmann recently hired a field service technician to expedite his customer service. The field service technician makes periodic visits to offer help in structuring preventive maintenance programs and in effect, teach the customer what can be done to extend the life of his machine. As a jack-of-all-trades, the field service technician can fix equipment on site, make an educational service call, or haul damaged equipment back to the shop. Beckmann noted that his next personnel addition will be another field service technician.

Beckmann currently has a staff of 21: 6 in service, 4 in turf equipment and supplies sales, 3 in irrigation sales, 3 in parts, and 5 in administration. The warehouse facility includes a 12,000-sq. ft. warehouse, 7200-sq. ft. service facility, and an 8000-sq. ft. office/display area. The display area is reminiscent of a lawn and garden store, not an industrial distributor. "People like to look at what they are going to buy," said Beckmann. "Since we have the room, we set up the equipment and let them kick the tires. We're in a marketing business and we have to merchandise the equipment." Beckmann added that it can take seven months to 1-1/2 years before a client can get final approval for a piece of equipment. "So, everytime we can expose him to it helps."

The current trend in the bureaucracies is to let level upon level of management scrutinize big purchases (like specialty equipment). With the frequency of selling equipment somewhat limited by their longevity, Beckmann views each meeting with the customer and corporate structure as another chance to sell the advantages of his product. The sale, however, can be lost at any level, often after a considerable investment of time and salesmanship. Beckmann continually battles the corporate gremlins that simply pick the least expensive piece of equipment.

Beckmann's mixture of customer commitment and service has proven successful, yet demanding. Particularly in a sales territory with a 300-mile radius. Expanding further, while still providing full service, proved to be a problem for the company. A solution came in the form of a return to a modified two-step distribution.

Recently Beckmann has begun setting up a commercial dealer operation in the outlying areas of his territory. This has benefitted the company by providing the Beckmann brand of service and education on a day-to-day basis by an affiliated dealer in the customer's locale. "The dealer network will give full service to outlying areas that were difficult to reach," said vice president Bob Tegethoff. "It is also a way to reach customers that like to spend their money locally." **WTT**

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Profiles in LANDSCAPE MANAGEMENT

HYDRO-SCAPE USES SALES SAVVY TO INCREASE IRRIGATION MARKET SHARE IN SOUTHERN CALIFORNIA

Operations Manager Don Larsen.

Sound, modern business practices are the reason Hydro-Scape Products, Inc., of Southern California keeps increasing its share of the irrigation and landscape products market during abundant rain and recession. Bob Tiglio provides the technical expertise with a background in golf course irrigation construction and Art Arns keeps management practices up to date with his manufacturing and sales background.

Operations Manager for the San Diego-based firm, Don Larsen told *Weeds Trees & Turf* Hydro-Scape made a major expansion into the Middle East in 1978 under the direction of Arch Humphreys. Today, Hydro-Scape has eight outlets with 3,000 accounts and it is only seven-years-old.

While many view Southern California as the land of opportunity and ever-increasing growth, Larsen noted that business is increasing but at a decreasing rate. "Business has been very good since the '74 recession, but last year was tough," said Larsen. He pointed out that the biggest problem during last year was the hard winter. In Southern California, while it never gets too cold to do contracting, the only thing that can hold up a job is rain and 1981 brought a lot of that. However, Hydro-Scape weathered the winter and in some ways came out ahead. Due to efficient management the company could afford to swallow some contracting downtime. Some of their competition wasn't as fortunate.

"While we see business in general increasing slower, we intend to increase our market share," said Larsen. Indeed, in the midst of last year's shakeout, Hydro-Scape bought up a Los Angeles-based competitor. "When the business climate got more severe during the past winter, the company concentrated on controlling purchases, reducing inventory and turning dollars more quickly. "We buy on a month-to-month basis," said Larsen. "One reason is that the cost of borrowing money is better on a month-to-month basis. Another reason is that we try to synchronize our buying periods with our sales periods." Due to Hydro-Scape's size, it has the ability to swap materials from one branch to the other when the need arises. Deliveries are made to the branches three times a week, although the company offers 24-hour delivery on pallet-size orders. "Service is very important," noted Larsen. "It is important to have orders ready when the customer needs it."

Hydro-Scape uses a Nixdorf computer to manage its more than 3,000 accounts and its inventory.

Service is one of the reasons that Hydro-Scape is more than an irrigation equipment distributor. Their customers demanded that they carry landscape supplies. "They liked the service they got with irrigation supplies, so they wanted us to carry other things," said Larsen. The list of landscape products the company carries has grown to include: decorative bark, edging materials, erosion control materials, fertilizers, fungicides, herbicides, insecticides, lumber, nursery items, outdoor lighting, plant material, seed, sod, soil amendments, tools and equipment.

Expansion into Middle East provides cushion to U.S. sales

While other distributors were figuring out how to expand their territory into another county or state, Hydro-Scape Products expanded into another continent—the Middle East. The company now maintains full time sales representation in two Saudi Arabia offices.

While margins are slimmer, the volume of the projects is significantly larger. "They are building cities from scratch in the desert," said Operations Manager Don Larsen. "It is a status symbol to plan and generate ornamental irrigation in the desert because they've never had it before." The largest job Hydro-Scape has supplied is the 120-sq.mi. airport in Riyadh. Larsen hastens to add that the Mid-East is not quite a plum ready to be picked. "It can be very frustrating," he said. "Time is dragged out. It can take from two to five years to nail down a project and there is a lot of red tape." Larsen added that exporting was foreign (no pun intended) to Hydro-Scape, but they soon learned that if the paperwork wasn't perfect they could lose their shirts.

"There were two reason for us to expand into the Middle East," said Larsen. "We thought it would be profitable and also help average out our domestic business cycles."

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1-54
Experienced personnel

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55
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More than 5,000 golf courses depend on ProTurf products specifically designed and research-tested for golf course usage: fertilizers, including specialty nutrient and regional products; fungicides; combinations of fertilizers and pesticides; seed, and application equipment.

56
Research expertise

Every ProTurf product is backed by more than 55 years of Scotts turfgrass experience. And, that knowledge is constantly being expanded by more than 120 full-time research specialists at the headquarters research center and five research stations across the country. They use more than 300 acres of test plots and 40 golf courses to study everything from plant pathology to equipment design and application. All, so you can have the most economical, convenient and effective turf products.

57
Seminars & tours

Each year, approximately 2,200 golf course superintendents take advantage of the 38 seminars conducted by the ProTurf Technical Institute. Attendees receive the latest information on a variety of subjects to aid the professional turf manager in solving problems fast. Special attention focuses on understanding fertilizers and new products, plus the identification, prevention and control of insects and disease. When seminars are conducted in Marysville, the groups also tour Scotts research labs and test plots.

58
Technical communications

Although the Tech Rep is the key communication channel, ProTurf keeps its clients up to date by other means, too. ProTurf publishes two free magazines to circulate information to the industry: "ProTurf," directed to improving golf course turf management; "Turf & Grounds Manager," directed to turf managers of companies, apartments, athletic fields, parks and lawn service firms. Additional data are included in technical bulletins, product guides and general materials.

59
Special services

ProTurf maintains one of the most comprehensive soil testing programs in the industry. Each **soil analysis** includes results and recommendations on the soil's *physical characteristics* (soil profile, water and air movement and thatch depth) and *chemical characteristics* (nutrient availability, nutrient deficiencies and chemical toxicities) in an easy-to-understand manner. During a year, more than 16,500 samples are received and tested.

Because irrigation water can have strong impact on turf growth and vigor, ProTurf also offers water quality testing. Each **water analysis** measures electrical conductivity, pH levels, sodium absorption and the amounts of chlorides, boron or bicarbonates.

No matter which test is done, your ProTurf Tech Rep will help you understand the results and proposed recommendations.

60
Budget planning

As a golf course superintendent, you face the challenge of maintaining your course within a given budget. Your Tech Rep will be happy to discuss your course's needs and make sound recommendations based upon your soil and water analysis results. He'll also help you decide what to do about drainage problems, nutrient and pesticide requirements and other turf-related subjects. Then, together, you can set up a maintenance program that exactly meets both your turf and budget needs.

61
A reputation of quality

ProTurf is the professional division of the O.M. Scott & Sons Company, *the* turfgrass industry leader.

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Hydro-Scape carries 16 lines of irrigation equipment, sod, chemicals, but no large landscape equipment.

A second important reason for Hydro-Scape branching out into landscape products is the dual roles of the Southern Californian landscape contractor. Many of the company's customers do both landscape contracting and irrigation contracting. "Prior to us no other distributor carried both," said Larsen. In a typical transaction, a landscape contractor might first purchase his irrigation materials, then soil amendments, fertilizer, trees, edging and sod.

Even while Hydro-Scape strives to be a full-service distributor, it keeps an eye on business management at all times. A case in point was the decision not to carry turfgrass maintenance equipment, such as mowers and aerators. (Their landscape equipment line consists mostly of hand tools and spreaders.) "We don't have a service facility, so we carry very little maintenance equipment," said Larsen. "We have no inventory, but we will order items on special request. Basically, those items take up a lot of space and turn slowly."

With margins being squeezed slimmer and slimmer, Hydro-Scape turned to computers to fatten profits. They hit paydirt with their Nixdorf system. Their 3000 regular business accounts were programmed according to their method of buying, method of payment, volume and other categories. This simplified the pricing structure and enabled the customer to get the best discount possible. Inventory management was also made more cost-effective. "The system enabled us to buy faster and we found that the cost of our inventory dropped," said Larsen, "especially the price of plastics." Larsen stressed that they don't pick up the computer print-out and then order accordingly. "We still like the personal feel for inventory. We do a rough count on what we have, what we're ordering, and what we need."

Hydro-Scape opted for a Nixdorf system because they felt that the smaller computer firm was more responsive to their needs than the bigger companies they had contacted. The system they initially purchased was supposed to be sufficient for five years. After two years a bigger system was needed due to Hydro-Scape's speedy growth. "We're extremely satisfied," said Larsen. "With the help of some good programmers and a little patience, the performance has been terrific."

Though Hydro-Scape has diversified into landscape products, over 60% of its business is in irrigation. Their coverage of the market is impressive; in sprinkler equipment alone they carry no less than 16 lines, including Rain-Bird, Royal Coach/Buckner, Toro and Safe-T-Lawn. Some manufacturers were wary of having Hydro-Scape also carrying their competitor's products. (Rain-Bird only recently tapped them as a Southern California distributor.) Yet Hydro-Scape has a firm policy on which products they will recommend to a customer. "If the specs are set, we will not change them," said Larsen. "Otherwise we put together the best package for the job, even if that entails using components from different manufacturers."

With drought conditions becoming more prevalent in Southern California, irrigation sales might not be viewed as a growth industry. Yet in its typical fashion Hydro-Scape views the drought as another opportunity to do business. "The drought woke a lot of people up to improving their irrigation systems," said Larsen. "Customers are opting for drip irrigation systems and a more controlled spray. With today's solid state technology the spray at each valve can be monitored."

California's Proposition 13 caused some initial cutbacks in orders but business is back close to normal. Larsen told *Weeds Trees & Turf* that the government has found some alternative sources of revenue. "The tourist industry is very big here and there is a high priority on appearance," he said. "The government has a big investment in landscaping."

An interesting point made by Larsen is that sod sales are still strong in Southern California. Hydro-Scape is the largest distributor of Pacific Green/Nunes sod and there has been an increase in the sale of drought-tolerant sod. Selling sod and plant materials is one area where the company's ties with their landscape contractor customers has been an asset. "A lot of growers are wary of selling to contractors they are not familiar with," said Larsen. "With us as the intermediary, the growers is assured his money and the contractor gets his materials."

The company carries 16 different lines of irrigation equipment without favoritism.

Hydro-Scape maintains WATS lines in Los Angeles, San Diego and Orange county in order expedite transactions with the vast number of growers they do business. In that manner they can also avoid inventorying plant materials. The company views plant materials as a potential liability. With the Wats phone lines they can contact various growers and have them ship directly. **WTT**

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Profiles in LANDSCAPE MANAGEMENT

GARFIELD WILLIAMSON DOUBLES PROFESSIONAL SALES IN FIVE YEARS TO NEW YORK METROPOLITAN AREA

The ability to respond promptly to the needs of the consumer is the most critical quality of a distributor for John Zajac, the vice president and general manager of Garfield Williamson, a distributor of seed and allied products in Jersey City, NJ. "Flexibility is what gives us our place in the market," he stated in a recent interview with *Weeds, Trees & Turf*.

The key to maintaining flexibility to Zajac is keeping the company a manageable size. The larger the company, the more layers of management a customer must wade through to have a request fulfilled. At Garfield Williamson, the customer doesn't have far to go for a definite answer. "As opposed to a large corporation, there is only one step in our organizational chart between the salesman and a definite yes or no," Zajac pointed out. Garfield Williamson's seven salesmen, covering the New York, New Jersey, Pennsylvania, and Connecticut territories report directly to Zajac, who then contacts his staff members in the office.

The company has been service oriented since its inception one hundred years ago. The founder, Garfield Williamson, was among the first to tap the industrial market, approaching businesses and factories with the idea of beautifying their grounds.

The company was purchased in the 1930s by the Wagner family, who still control it today. The market remained more or less the same until the mid-forties. The business swung sharply toward retail after World War II as New York City dwellers spread out to the suburbs, creating the sprawling bedroom communities on Long Island, New Jersey and Connecticut. Acres of well kept lawn were being supplied by a new specialized retailer, the lawn and garden center, who was in turn being supplied by Garfield Williamson.

The retail market nearly had the full attention of the company until, with the increasing affluence of the region, golf courses began sprouting up and homeowners turned to professional landscapers.

Service has become even more essential as sales to professional users grow in comparison to the retail sales. "In the last five years professional accounts have grown from 20% of our business to at least 40%," estimated Zajac. "With an activity as weather dependent as seeding, servicing the professional sector is a demanding job. We are able to prepare and deliver 700-lb of a special mixture in two days."

As part of this service, customers are asking the distributor to take their burden of inventory off their shoulders. Because of uncertain cash flow, they are letting the distributor act as their warehouse. Business cycles have proved the distributor can warehouse more cheaply because it has better inventory control. This requires more work from the distributor. A customer's initial order used to be the biggest portion of his needs. Now he requires frequent deliveries of smaller orders.

Zajac feels that the high value that the customer has placed upon his time also benefits Garfield Williamson. The increasing prevalence of a "time is money" attitude has pushed professionals to invest in the high grade proprietary grasses he sells. Zajac claims, Eclipse Kentucky bluegrass sells equally as well as conventional types of bluegrass although it costs almost three times as much. The contractor justifies the higher priced specialty grasses as insignificant monetarily when compared to the overall cost of the job.

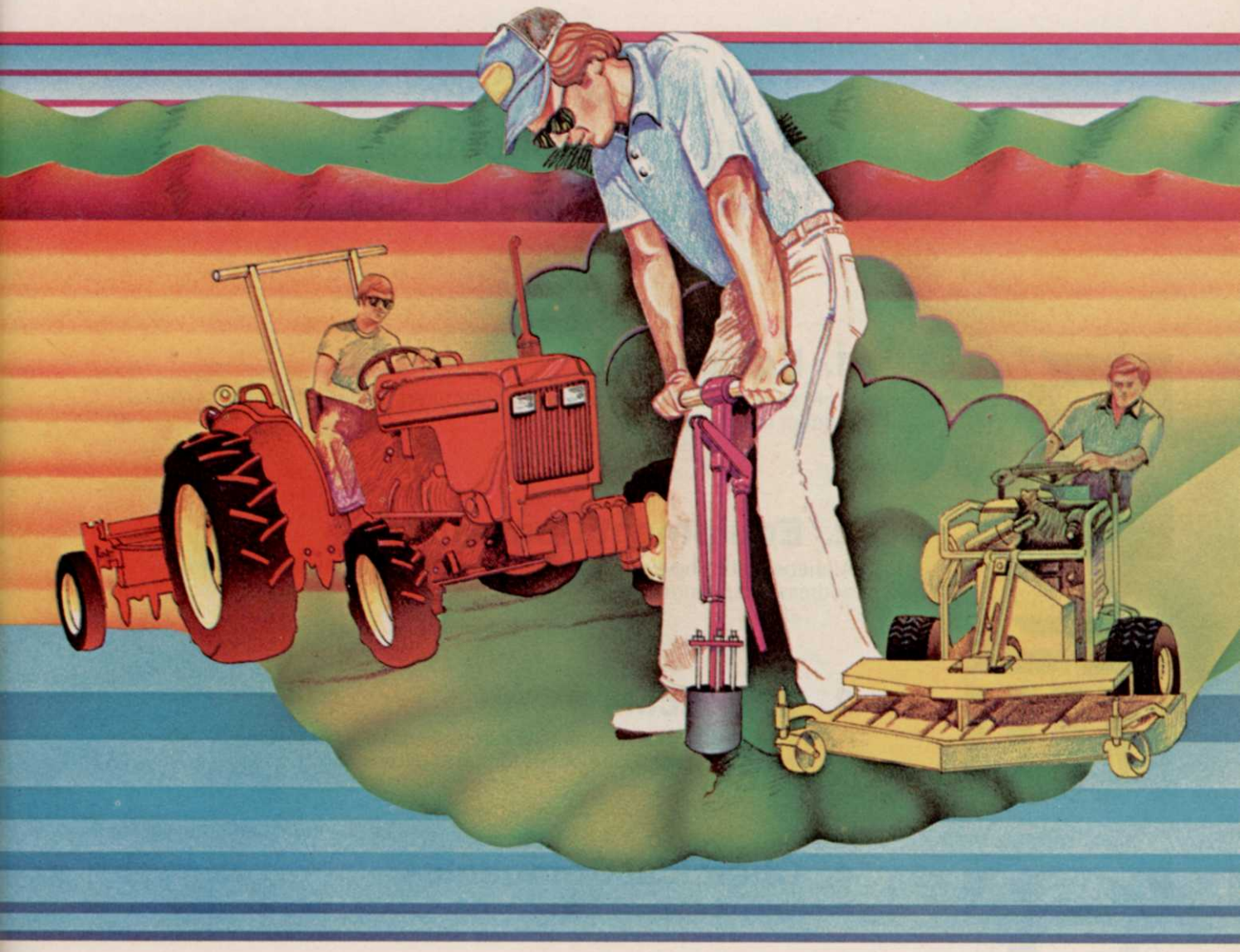
Even the retail consumer has learned to appreciate special formulations and varieties of both seed and chemicals. A more informed public is now approached in much the same manner as the professional. Advertising and packaging, using the names of the specific seed varieties, is being used for the first time on the consumer level. Garfield Williamson now advertises its Wonderlawn brand of consumer products in local print, TV, and radio as well as providing retailers with point-of-purchase aids.

GW vice president and general manager John Zajac (left), office manager Bill Lind (center), and warehouse superintendent Peter Matu.

Despite Garfield Williamson's success in both professional and retail markets, it is now competing with a growing trend where professionals form groups to buy directly from the manufacturers. Zajac dismisses this as a fad, although the activity is growing in the New York and New Jersey areas. "These groups are big enough to buy from the manufacturers, but not big enough to demand the kind of service they may need in the height of the season. Distributors may be able to help, but we are bound to take care of our regular customers first. This will probably cause a ripple in the industry and then even out."

Zajac is sure the position of the distributor is secure in the green industry as long as he doesn't overextend himself. "If your area gets too big, you can't effectively act as a distributor. We prefer to cultivate the 250-mile radius around New York city, our main market, more intensely than go further outward." **WTT**

WEEDS TREES & TURF



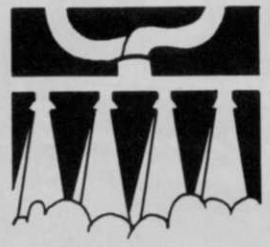
'83 Manager's Guide to Equipment, Chemicals & Supplies

WEEDS TREES & TURF

1983 Manager's Guide to Equipment, Chemicals Supplies and Distributors

1. Equipment

From aerators to vibratory plows, manufacturers of the tools and materials for outdoor maintenance 40



2. Equipment Companies

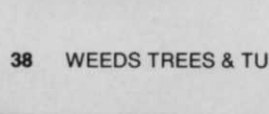
Alphabetical listing by manufacturers' names of who makes what, with address and phone number 57

3. Chemicals

From adjuvants to wetting agents, a comprehensive list of liquids, granulars, and organic compounds for turf and trees 75

4. Chemical Companies

Alphabetical listing by manufacturers' names with addresses and phone number 80



5. Seed Companies

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Turfco Mfg Inc
UTECO Inc
Young Industries

Agitators

Agrotec Inc
Hypro Div Lear Siegler Inc
Jaeco Pump Co
Kembro Inc
Master Sprayers Inc
Spraying Systems Co
Tuflex Mfg Co

Anchors, Earth

A B Chance Co
Foresight Industries Inc
Trees Inc

Aquatic Weed Eating Fish

Sea Ranch

Aquatic Weed Harvesters

Hockney Under Water Weed Cutters
Kembro Inc
Mud Cat National Car Rental System

Augers

Bartlett Mfg Co
Clark Equipment Co Melroe Div
Ground Hog Inc
Hoffco Inc
International Reforestation Suppliers Inc
Lakeshore Equipment & Supply Lesco Prods
Massey-Ferguson
McMillen Div
Opdykes Truck Sales
Pitman Div
Safety Test & Equipment Co
Don Savage Co
Seymour Mfg Co
P E Skaling Soilmoisture Equipment Corp
Stihl Inc
UTECO Inc

Backfillers

American Trencher
Roscoe Brown Corp
J I Case Drott Div
Guest Industries Inc
Seaman Co

Back Hoes

American Trencher
Ariens Co
Brillion Iron Works
J I Case
J I Case Drott Div
Caterpillar Tractor Co
Clark Equipment Co Melroe Div
Ditch Witch Div Charles Machine Works
Ford Motor Co Tractor Operations
K-D Manitou Inc
Kubota Tractor Corp
Long Mfg NC Inc
Seaman Co
Steiner Corp
Union Fork & Hoe Co
Vermeer Mfg Co
Yanmar Tractor (USA) Inc

Batteries, Turf Vehicles

Bunton Co
Eagle Vehicles Inc
Exide Corp
E-Z-Go Golf Car
Goodall Div Bunton Co
Gould
Professional Turf Specialties
Trojan Battery Co

Battery Chargers

Deere & Co
Eagle Vehicles Inc
Exide Corp
E-Z-Go Golf Car
Ford Motor Co Tractor Operations

Beach Cleaners

Glenmac Inc

Benches

Algoma Net Co-Div Gleason Corp
American Playground Device Co
BigToys
Columbia Cascade Timber
Grand Rock Co
Kay Park Rec Corp
Landscape Forms Inc
Miracle Recreation Equipment Co
Playworld Systems
Rotocast Plastic Products Inc
Standard Golf Co
Trojan Playground Equipment Mfg Co

Blades, Mower

Ariens Co
Brouwer Turf Equipment Ltd
Bunton Co
FMC Corp Agricultural Mach Div
Goodall Div Bunton Co
Lakeshore Equipment & Supply Lesco Prods
MTD Products Inc
Orbex Inc
Power Lawnmower Parts Inc
Sensation Corp
Steiner Corp
Toro Co Commercial Prods
UTECO Inc
Yanmar Tractor (USA) Inc

Blades, Dozer/Scraper

Ariens Co
Brillion Iron Works
Bush Hog Div Allied Prods Corp
Excel Industries Inc
FMC Corp Agricultural Mach Div
Ford Motor Co Tractor Operations
Haban Mfg Co
Kubota Tractor Corp
Long Mfg NC Inc
Ransomes Inc
Steiner Corp
UTECO Inc
Wheel Horse Products Inc
Yanmar Tractor (USA) Inc
York Rakes Div York Modern Corp

Bleachers

Kay Park Rec Corp
Miracle Recreation Equipment Co

Blowers

Atwater Strong Div
Billy Goat Industries Inc
Buffalo Turbine Agricultural Equip Co
Bunton Co
Central Quality Industry Inc
Finn Corp
Giant Vac Mfg Inc
Goodall Div Bunton Co
HMC/Green Machine
Homelite Div Textron Inc
Jacobsen Div Textron Inc
Lawn-Boy Product Group
Morbark Industries Inc
MTD Products Inc
Olathe Mfg Inc
Parker Sweeper Co
Poulan/Weed Eater
Ransomes Inc
Sensation Corp

YOUR GRASS WILL BE GREENER

Attend PLCAA's 3rd Annual Convention and Trade Show
November 16-18, 1982
Indiana Convention • Exposition Center
Indianapolis, Indiana

Early Bird Registration/Reception

Be present Monday evening, November 15, at the Early Bird Registration/Reception and theme party. Socialize with your peers, renewing old acquaintances and making new ones. Here is an opportunity to complete your registration, avoid those long lines on Tuesday morning and be on time for the opening.

Convention Program

In response to last year's attendees evaluations the program has been expanded to three days and will offer repeat workshops. Topics will include **Motivation; Government Regulations; Management and Stress; Legal Issues; Client Relations** and a special **Panel Presentation** on **"Hot Issues."**

Keynoter

Keynoting the convention this year will be Earl L. Butz, former U.S. Secretary of Agriculture, and Dean Emeritus of Agriculture, Purdue University, West Lafayette, Indiana. Dr. Butz will address the subject of the value of the small business entrepreneur in the American economic system under the title, "Populism, Politics, and Progress."

Trade Show

View the latest developments of products and services and have your questions answered by exhibitors in the attractive Convention Exposition Center conveniently located to hotels and downtown. Exhibit hours have been extended into the afternoon of the final day to provide more visitation time by registrants. Many new exhibitors representing a wide diversity of product lines already are contracted for PLCAA '82.

Send to: **Professional Lawn Care Association of America**
435 N. Michigan Avenue, Suite 1717
Chicago, IL 60611
312/644-0828

I'm interested in attending PLCAA's Third Annual Convention and Trade Show. Please send me information on:

___ Registration ___ Exhibiting ___ Membership

Name _____

Company _____

Address _____

City, State, Zip _____

Equipment

continued

Turf Vac Corp
Vandermolen Corp
Westheffer Co
Yard Vac Prods Inc

Bridges

Continental Custom Bridge Co
Miracle Recreation Equipment Co
Standard Golf Co
Western Cascade Inc
Western Wood Structures Inc

Brush Cutters, Hand Held

American Standard Co
Bartlett Mfg Co
Echo Inc
Halls Safety Equipment Inc
Homelite Div Textron Inc
Lawn-Boy Product Group
Poulan/Weed Eater
Seymour Smith & Son Inc
Solo Inc
Stanley Hydraulic Tools
Stihl Inc
Union Fork & Hoe Co

Brush Cutters, Right-of-Way

Bombardier Ltd
Roscoe Brown Corp
Bush Hog Div Allied Prods Corp
FMC Corp Agricultural Mach Div
Kershaw Mfg Co
Kin Co Mfg
Massey-Ferguson
National Hydro-Ax Inc
Rhino Products Inc
Royer Foundry & Machine Co
Tiger Corp
Union Fork & Hoe Co
Woods Div Hesston Corp

Bucket Lifts

Asplundh Mfg Div
Correct Mfg Corp
K-D Manitou Inc
Mobile Aerial Towers Inc
Opdykes Truck Sales
Pitman Div
Reach-All Mfg
Torco Equipment Co

Chain Saws

Alpina North America
Black & Decker Mfg Co
Buck Haven Industries Inc
Citrus Systems Inc
Clinton Engines Corp
Deere & Co
Echo Inc
Fairmont Hydraulics
HMC/Green Machine
Homelite Div Textron Inc
Limb-Lopper Div/Robinson Ind
Massey-Ferguson
Milwaukee Electric Tool Corp
Poulan/Weed Eater
Skil Corp
Solo Inc
Stanley Hydraulic Tools
Stihl Inc

Chain Saw Parts

Alpina North America
Buck Haven Industries Inc
Citrus Systems Inc
Clinton Engines Corp
Deere & Co
Echo Inc
Hoffco Inc
Poulan/Weed Eater
Power Lawnmower Parts Inc
Skil Corp
Solo Inc
Stihl Inc

Chippers

Asplundh Mfg Div
Chipmore Mfg Co
Didier Mfg
Lindig Mfg Corp
Medallion Div Farmhand Inc
Mitts & Merrill Inc
Morbark Industries Inc
Olathe Mfg Inc
Royer Foundry & Machine Co
Safety Test & Equipment Co
Sidewinder Int'l Inc
Strong Mfg Co
Torco Equipment Co
UTECO Inc
Vandermolen Corp
Vermeer Mfg Co
Wood/Chuck Chipper Corp

Cranes

Auto Crane Co
BlueBird Int'l Inc
J I Case
J I Case Drott Div
Master Craft Industrial Equipment Corp
Opdykes Truck Sales
Pitman Div

Cultivators

Ariens Co
Brillion Iron Works
Engineering Products Co
Gilson Brothers Co
Gravely
HMC/Green Machine
Howard Rotovator Co
International Harvester Co
Kubota Tractor Corp
Lambert Corp
Massey-Ferguson
MTD Products Inc
Tradewinds Inc
Union Fork & Hoe Co
Yazoo Mfg Co

Dethatchers

BlueBird Int'l Inc
E-Z Rake Inc
Fuerst Brothers Inc
Giant Vac Mfg Inc
Hahn Inc
Howard Rotovator Co
Jacobsen Div Textron Inc
F D Kees Mfg Co
Lambert Corp
Nunes Mfg
Olathe Mfg Inc
Parker Sweeper Co
Ryan Turf/OMC Lincoln
Sensation Corp
Toro Co Commercial Prods
Vemco Corp of America
Yard Vac Prods Inc

Dozers

American Trencher
Auburn Consolidated Industries Inc
J I Case
Caterpillar Tractor Co
Engineering Products Co
Grasshopper Co
International Harvester Co
Yanmar Tractor (USA) Inc

Drainage Tubing

Advanced Drainage Systems Inc
Cambridge Soil Services of America
Francesville Drain Tile Corp
Hancor Inc

Dredgers

Mud Cat National Car Rental System

Drills

Black & Decker Mfg Co
Halls Safety Equipment Inc
Milwaukee Electric Tool Corp
Skil Corp

Dusters

B & G Equipment Co
John Blue Co
Buffalo Turbine Agricultural Equip Co
Echo Inc
Encap Products Co
H D Hudson Mfg Co Professional Prods Div
Root-Lowell Corp
Solo Inc
Universal-Gerwin Div Leigh Products Inc
Vandermolen Corp

Edgers

Ariens Co
Bunton Co
Deere & Co
Echo Inc
Excel Industries Inc

BUNTON CUTS THE COST OF CUTTING*

BUNTON®
COMMERCIAL MOWERS

* The new Bunton 61-inch self-propelled mower cuts the same width as a comparable riding mower, but costs about half as much.

61 in.

Or . . . Buy two Buntons and cut twice as much grass for about the cost of one comparable riding mower.

122 in.

This new Bunton self-propelled mower is the latest step forward in our constant advance in the design and building of more productive, cost efficient equipment. It is a 16 horsepower, gasoline powered turf mower with excellent maneuverability, fingertip steering and controls, six forward ground speeds and independent blade speed.

Please write or call for additional information.

Bunton builds 'em better.

BUNTON CO.

P.O. Box 33247
Louisville, KY 40232 U.S.A.
Phone 502/966-0550 • Telex 204-340

Contract numbers:
G.S.A.: GS-07S-07659
H.U.D.: OPH (CO)m-3650

Circle No. 104 on Reader Inquiry Card

Equipment

continued

Goodall Div Bunton Co
HMC/Green Machine
Hoffco Inc
K-D Manitou Inc
Lakeshore Equipment & Supply Lesco Prods
MTD Products Inc
Olathe Mfg Inc
Patrician Products Inc
Poulan/Weed Eater
Ransomes Inc
Sarlo Power Mowers Inc
Turfco Mfg Inc
Union Fork & Hoe Co
Yazoo Mfg Co

Engines

American Honda Motor
Briggs & Stratton Corp
Bunton Co
Caterpillar Tractor Co
Clinton Engines Corp
Goodall Div Bunton Co
International Harvester Co
Kawasaki Motors Corp Engine Div
Kohler Co Engine Div
Kubota Tractor Corp
Power Spray Technology Inc
Strong Ent Inc
Tecumseh Products Co Engine Div
Teledyne Wisconsin Motor
Toro Co Commercial Prods
Tuflex Mfg Co
Westheffer Co
Yanmar Tractor (USA) Inc

Engine Parts

Briggs & Stratton Corp
Buck Haven Industries Inc
Bunton Co
Caterpillar Tractor Co
Clinton Engines Corp
Echo Inc
Goodall Div Bunton Co
Lakeshore Equipment & Supply Lesco Prods
Power Lawnmower Parts Inc
Strong Ent Inc
Tecumseh Products Co Engine Div
Yanmar Tractor (USA) Inc
Yazoo Mfg Co

Erosion Control Fabric

Enkamat Div American Enka Co
Erosion Control Systems/Gulf States Paper Corp
Hendrix & Dail Inc
Hoechst Fibers Industries
Mangelsdorf Seed
Turfibre Products
Jim Walls Co

Fault Finders

Progressive Electronics

Fertilizer Injectors

Agro Chem Inc
John Blue Co
Chemilizer Products Inc
Citrus Systems Inc
Ross Daniels Inc
Dragon Irrigation Equipment by Wes-Co
Holly Filter
Hydroflo Corp
Inject-O-Meter Mfg Co
Jaeco Pump Co
Power Spray Technology Inc
Professional Turf Specialties
Raindrip Inc
Smith Precision Products
Strong Ent Inc
Trees Inc
Hermann A Wirth

Filters, Sand

Laval Corp, Claude

Foggers

AMS Inc
B & G Equipment Co
FMC Corp Agricultural Mach Div
Root-Lowell Corp
Spraying Systems Co
Thompson Mfg Co
Trees Inc

Forklifts

Brouwer Turf Equipment Ltd
Roscoe Brown Corp
Bush Hog Div Allied Prods Corp
J I Case
Caterpillar Lift Trucks
Caterpillar Tractor Co
Clark Equipment Co Melroe Div
Deere & Co
Dynamic Industries
Edwards Equipment Co
Guest Industries Inc
International Harvester Co
K-D Manitou Inc
Massey-Ferguson
Master Craft Industrial Equipment Corp
Morbark Industries Inc
Princeton Mfg Co
Spyder Sales Inc

Generators

American Honda Motor
Clinton Engines Corp
Deere & Co
Ford Motor Co Tractor Operations
Friend Mfg Corp
Homelite Div Textron Inc
MTD Products Inc
Power Spray Technology Inc
Safety Test & Equipment Co
Skil Corp
Solo Inc
Trees Inc

Golf Cars

Bajaj America Inc
Club Car Inc
Columbia Car Corp
Eagle Vehicles Inc
Electric Carrier Corp
E-Z-Go Golf Car
Go-Fore
Melex USA Inc
Nordco Electric Vehicles
Taylor-Dunn Mfg Co
Yamaha Motor Corp

Golf Course Accessories

Citrus Systems Inc
Fox Valley Marking Systems Inc
Lakeshore Equipment & Supply Lesco Prods
Par Aide Products
A G Stafford
Standard Golf Co

Grass Pavers

Grass Pavers Ltd
Interlocking Paver Mfg Assoc
Turfgrass Products

Hose & Reels

Agrotec Inc
Anchor/Swan Corp
Citrus Systems Inc
Deere & Co
Encap Products Co
Finn Corp
Flexitube International Corp
FMC Corp Agricultural Mach Div
Friend Mfg Corp
Clifford B Hannay & Son Inc
Hanson Equipment Co
H D Hudson Mfg Co Professional Prods Div
Lakeshore Equipment & Supply Lesco Prods
Marco Sprayers
Master Sprayers Inc
Power Spray Technology Inc
Professional Turf Specialties
Raindrip Inc
Strong Ent Inc
Torco Equipment Co
Toro Co Commercial Prods
Travelrain Power Sprinkler
Trees Inc
Tuflex Mfg Co
Westheffer Co

Insect Killers, Electrical

Buffalo Turbine Agricultural Equip Co
Deere & Co
Devpro Machine Inc Insectocutor Div
Insect-O-Cutor Inc
Vandermolen Corp

The GX-800 is just slightly over 800 lbs., light enough to protect valuable turf.

The load bed tilts for easy access to the drive package.

The GX-800 is suited to move just about anything.

The GX-800 carries up to 800 lbs. in the rugged loadbed.

THE E-Z-GO GX-800. THE LASTING IMPRESSION IT LEAVES WON'T BE ON YOUR TURF.

E-Z-GO introduces a new concept in landscape maintenance. The light-turf vehicle that's perfect when you need a utility car, and a truck is too much.

It's as strong as an ox, but gentle as a lamb.

The E-Z-GO GX-800 is the perfect utility vehicle for landscaping. It's light and gentle on your valuable grounds. Yet it's strong enough to carry loads, climb hills, and ride in bad weather. The body is constructed of Galvanneal, steel plating that's treated with rust preventive zinc oxide. So they drive the fairway longer than any other utility vehicle. The chassis is welded high-yield tubular steel. It features a protective vinyl bumper strip, and a four-way diamond pattern treadplate design on the bed makes the GX-800 stronger all around. (Loadbed is not Galvannealed).

Put all your garden tools to bed.

The GX-800 has a 44" x 40" x 8" loadbed in the back that's deep enough to carry all your turf tools. It carries up to 800 lbs., and heavy duty springs and shocks make the ride smooth and comfortable, no matter how tough the rough. The loadbed tilts for complete access to drive package. And the sides and tailgate are easily removed.

This beast is a beauty on your budget.

You can afford three GX-800 vehicles for the price of one heavy-duty pickup truck. It's light enough so that it's economical on fuel and requires only standard maintenance. And it'll last years and years because it's engineered by E-Z-GO.

The GX-800 is suited for anything.

From the electronic ignition, to the dual rear brake, to the hypoid ring and pinion differential, the E-Z-GO GX-800 light turf vehicle is strong enough for any landscaping job. Yet it is light enough so it won't be a landscraper. It's perfect for golf courses, cemeteries, public parks, office grounds-keeping, or large, private residential landscaping.

The GX-800 is especially a utility runabout. It's a tremendous timesaver for the superintendant who has to get around the grounds to oversee his crew. It can take the shortest route to its destination. For more information, call your nearest E-Z-GO representative.

E-Z-GO
TEXTRON

P.O. Box 388, Marvin-Griffin Road
Augusta, Georgia 30913-2699.

Circle No. 114 on Reader Inquiry Card

Equipment

continued

Irrigation, Drip

AMS Inc
Aquatic Irrigation Systems Inc
Chapin Watermatics Inc
Dayni Controls Mfg Co
Hendrix & Dail Inc
Holly Filter
Hydro Rain
Irri-Trol Mfg Co
Jaeco Pump Co
Raindrip Inc
Royal Coach/Buckner
Submatic Irrigation Systems
Westheffer Co

Irrigation, Injection

Agro Chem Inc
Aquatrols Corp of America
Barnant Co
John Blue Co
Dragon Irrigation Equipment by Wes-Co
Fert-O-Ject
Hydroflo Corp
Inject-O-Meter Mfg Co
Jaeco Pump Co

Irrigation, Mobile

Ag-Rain Inc
Finn Corp
Lakeshore Equipment & Supply Lesco Prods
Royal Coach/Buckner
Travelrain Power Sprinkler

Irrigation Systems & Supplies

Ag-Rain Inc
AMETEK/Plymouth Prods Div
AMS Inc
Champion Brass Mfg Co
Champion Sprinkler Mfg Co
Dayni Controls Mfg Co
Dema Engineering Co
Grass Pavers Ltd
Hendrix & Dail Inc
Hinds Int'l Inc
Holly Filter
Hydroflo Corp
Hydro Rain
Hydro Terra Corp
Irri-Trol Mfg Co
Irrometer Co
Jaeco Pump Co
King Brothers Industries
Laval Corp, Claude
Lumenite Electronic Co
National Irrigation Specialists
L R Nelson Corp
Rain Bird Sprinkler Mfg Corp
Rain-O-Mat Sprinklers Inc
Richdel Inc
Royal Coach/Buckner
Safe-T-Lawn Inc
Submatic Irrigation Systems
Thompson Mfg Co
Toro Co Irrigation Div
Weather-matic

Landscape Design Kits

American Stamp Co
Miracle Recreation Equipment Co

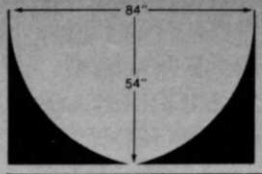
Lighting Systems

Columbia Cascade Timber
GTE Sylvania
Intermatic Inc
Lighting Prods Div McGraw-Edison Co
Little Giant Pump Co Sub Tecumseh Prods Co
Musco Sports-Lighting Inc
Otterbine-Barebo Inc
Spring City Electric Mfg Co
Westinghouse Electric Corp Lamp Div

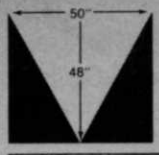
Litter Receptacles

BigToys
Clean City Squares Inc

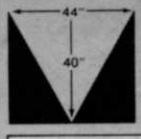
Vermeer Buyer's Guide for



TS-84T. Truck-mounted. Transplants trees with maximum trunk diameter of 8". Six hydraulically activated, high tensile steel spades. Gravity-feed water tanks for spade lubrication.



TS-50M. Truck-mounted. Outstanding maneuverability. Extension and side-shift features let you hydraulically position the spade an additional 21" away from the frame and 15½" left or right of center.



TS-44. Available in trailer-mounted, tractor-mounted or truck-mounted models. (Plus the option to extend or side shift for greater maneuverability as a truck-mounted unit.) Hydraulically transplants 4" diameter trees.

Call today! (800) 247-2347

Columbia Cascade Timber
Kay Park Rec Corp
Lakeshore Equipment & Supply Lesco Prods
Standard Golf Co

Loaders

American Trencher
Atwater Strong Div
Bush Hog Div Allied Prods Corp
J I Case
J I Case Drott Div
Caterpillar Tractor Co
Clark Equipment Co Melroe Div
Deere & Co
Dynamic Industries
Engineering Products Co
Ford Motor Co Tractor Operations
International Harvester Co
K-D Manitou Inc
Kubota Tractor Corp
Long Mfg NC Inc
Massey-Ferguson
Sperry New Holland
Steiner Corp
Tiger Corp
Yanmar Tractor (USA) Inc

Log Splitters

Buck Haven Industries Inc
Custom Products of Litchfield Inc
Deere & Co
Didier Mfg
Ford Motor Co Tractor Operations
Giant Vac Mfg Inc
Gilson Brothers Co
Hanson Equipment Co
Kubota Tractor Corp
La Font Corp
Lindig Mfg Corp
Morbark Industries Inc
MTD Products Inc
Poulan/Weed Eater
Shaver Mfg Co
UTECO Inc
Vermeer Mfg Co
W-W Grinder Inc
Yanmar Tractor (USA) Inc

Markers, Field

Agrotec Inc
B & G Equipment Co
Laurie Carlson & Assoc
Richway Industries
Smithco Inc
Turfgrass Products

Measuring Wheels

Agro Chem Inc
Agrotec Inc
Gandy Co
Professional Turf Specialties
Rolatape Corp
Safety Test & Equipment Co
Westheffer Co

Mist Blowers

Agrotec Inc
John Blue Co
Buffalo Turbine Agricultural Equip Co
Echo Inc
Encap Products Co
FMC Corp Agricultural Mach Div
Friend Mfg Corp
Hanson Equipment Co
HMC/Green Machine
H D Hudson Mfg Co Professional Prods Div
Professional Turf Specialties
Solo Inc
Stihl Inc
Vandermolen Corp
Westheffer Co

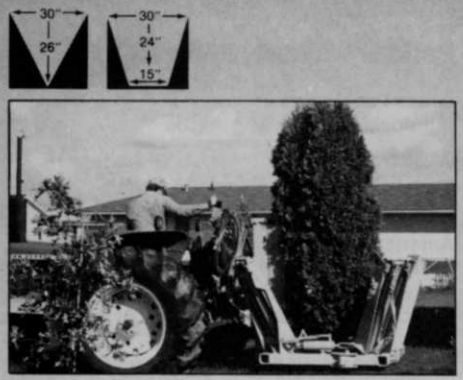
Moisture Sensors

Hydro Terra Corp

Mowers, Flail

Brillion Iron Works
Roscoe Brown Corp
Edwards Equipment Co

tree-moving equipment.



TS-30. Trailer-mounted or tractor-mounted. Ideal for nurseries, tree farms, rental yards and tree service firms. Adjustable towers enable operators to transplant or package either cone shaped or flat-bottom trees or shrubs up to 3" in diameter.

TS-24. Compact. Economical. Tractor-mounted. Or, slips onto the forks of most skid steer loaders equipped with an auxiliary hydraulic hookup (with a minimum lifting capacity of 1,200 lbs.). Transplants or packages small trees up to 2".

TS-20. Vermeer's mini-spade. Ideal for nurseries that package large quantities of stock for resale. Tractor-mounted. Hooks up to the standard Category I or Category II three-point hitch of your tractor.

Vermeer Manufacturing Company, 8809 New Sharon Road, Pella, Iowa 50219

Vermeer THE DIGGIN' DUTCHMAN

Circle No. 150 on Reader Inquiry Card

Equipment

continued

Excel Industries Inc
FMC Corp Agricultural Mach Div
Ford Motor Co Tractor Operations
Gravely
Haban Mfg Co
International Harvester Co
Kubota Tractor Corp
Mathews Co
MoTrim Inc
Mott Corp
Ransomes Inc
Steiner Corp
Turner International (Eng) Ltd
Vemco Corp of America
Woods Div Hesston Corp
Yanmar Tractor (USA) Inc
Yazoo Mfg Co

Mowers, Reel

Brouwer Turf Equipment Ltd
Hahn Inc
Jacobsen Div Textron Inc
Locke Mfg Inc
MoTrim Inc
MTD Products Inc
National Mower Co
Professional Turf Specialties
Ransomes Inc
Roseman Mower Corp
Toro Co Commercial Prods
Yazoo Mfg Co

Mowers, Rotary

American Honda Motor
Ariens Co
Atlas Tool & Mfg Co
Bunton Co
Clinton Engines Corp
Cushman Turf/OMC Lincoln
Deere & Co
Edwards Equipment Co
Engineering Products Co
Excel Industries Inc
FMC Corp Agricultural Mach Div
Ford Motor Co Tractor Operations
Giant Vac Mfg Inc
Gilson Brothers Co
Goodall Div Bunton Co
Grasshopper Co
Gravely
Haban Mfg Co
Heckendorn Mfg Co
International Harvester Co
Jacobsen Div Textron Inc
F D Kees Mfg Co
Kubota Tractor Corp
Kut-Kwick Corp
Lawn-Boy Product Group
Long Mfg NC Inc
Massey-Ferguson
MoTrim Inc
MTD Products Inc
Nunes Mfg
Howard Price Turf Equip
Professional Turf Specialties
Ransomes Inc
Rhino Products Inc
Ryan Turf/OMC Lincoln
Sarlo Power Mowers Inc
Sensation Corp
Smithco Inc
Snapper Products Equipment
Solo Inc
Sperry New Holland
Steiner Corp
Terrain King Corp
Tiger Corp
Toro Co Commercial Prods
Tradewinds Inc
Woods Div Hesston Corp
Yazoo Mfg Co

Mowers, Sickle Bar

Ford Motor Co Tractor Operations
Gravely
Haban Mfg Co
International Harvester Co
Kin Co Mfg
MoTrim Inc
Solo Inc
Sperry New Holland
UTECO Inc

Mower Parts

Ariens Co
Brouwer Turf Equipment Ltd
Bunton Co
Goodall Div Bunton Co
International Harvester Co
Lakeshore Equipment & Supply Lesco Prods
Lawn-Boy Product Group
MoTrim Inc
MTD Products Inc
Orbex Inc
Power Lawnmower Parts Inc
Professional Turf Specialties
Sensation Corp
Toro Co Commercial Prods
Woods Div Hesston Corp
Yazoo Mfg Co

Mulchers, Hydraulic

American Trencher
Bowie Industries Inc
Erocon Pacific Corp
Finn Corp
Reinco Inc

Net Layers

Nunes Mfg
Robark

Netting

J A Cissel Co
Conwed Corp
Ross Daniels Inc
Delmarva Textile Co
Encap Products Co
International Reforestation Suppliers Inc
Turfgrass Products
Turfibre Products

Netting, Erosion Control

Conwed Corp
Delmarva Textile Co
Enkamat Div American Enka Co
International Reforestation Suppliers Inc
Turfibre Products

Nozzles & Accessories

Agrotec Inc
AMS Inc
Broyhill Co
Citrus Systems Inc
Delavan Corp
Erocon Pacific Corp
Finn Corp
FMC Corp Agricultural Mach Div
Friend Mfg Corp
Hanson Equipment Co
Hotsy Corp
H D Hudson Mfg Co Professional Prods Div
Hydro Rain
Lakeshore Equipment & Supply Lesco Prods
Liqui*Lawn Corp
Master Sprayers Inc
Melnor Industries
Minnesota Wanner Co
Power Spray Technology Inc
Safe-T-Lawn Inc
Smithco Inc
Sorensen Sprayers Inc
Spraying Systems Co
Strong Ent Inc
Thompson Mfg Co
Tri-Con Inc
Tuflex Mfg Co
Westheffer Co

Patio & Walkway Materials

Grass Pavers Ltd
Interlocking Paver Mfg Assoc

Picnic Tables

American Playground Device Co
BigToys
Kay Park Rec Corp
Miracle Recreation Equipment Co
Playworld Systems
Trojan Playground Equipment Mfg Co

Pipe

Advanced Drainage Systems Inc
Long Mfg NC Inc
McDowell Mfg Co

Planters

Clean City Squares Inc
Columbia Cascade Timber

Ellis Mfg Co
International Harvester Co
Landscape Forms Inc
Miracle Recreation Equipment Co
Parker Greenhouses Int'l
Trans-Tree Corp

Play Structures

American Playground Device Co
BigToys
Columbia Cascade Timber
Delmer F Harris Co
Kay Park Rec Corp
Miracle Recreation Equipment Co
Playworld Systems
Trojan Playground Equipment Mfg Co

Plows, Sand Trap

Dedoes Industries Inc
Toro Co Commercial Prods

Pools, Decorative

Fiberglass Unlimited Inc

Post Drivers

Deere & Co
Foresight Industries Inc
Guest Industries Inc
McMillen Div
Rhino Sales Corp
Shaver Mfg Co
Union Fork & Hoe Co

Post Hole Diggers

Bush Hog Div Allied Prods Corp
Clark Equipment Co Melroe Div
Deere & Co
Feldmann Engineering & Mfg Co
Ford Motor Co Tractor Operations
Foresight Industries Inc
Ground Hog Inc
HMC/Green Machine
Hoffco Inc
International Reforestation Suppliers Inc
Kubota Tractor Corp
Massey-Ferguson
McMillen Div
Rhino Sales Corp
Don Savage Co
Seymour Mfg Co
Shaver Mfg Co
Stihl Inc
Union Fork & Hoe Co
UTECO Inc
Yanmar Tractor (USA) Inc

Pressure Gauges

Irrometer Co

Pressure Washers

Agrotec Inc
John Blue Co
Broyhill Co
Citrus Systems Inc
Deere & Co
Ford Motor Co Tractor Operations
Friend Mfg Corp
Hanson Equipment Co
Hotsy Corp
Marco Sprayers
Massey-Ferguson
Master Sprayers Inc
Minnesota Wanner Co
Northeast Industries Inc
Sioux Steam Cleaner Corp
Strong Ent Inc
Tri-Con Inc
Tuflex Mfg Co
Westheffer Co

Pruners

American Standard Co
Bartlett Mfg Co
Citrus Systems Inc
Deere & Co
Echo Inc
Fairmont Hydraulics
Florian Pruners
Friend Mfg Corp
Halls Safety Equipment Inc

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Safety Test & Equipment Co
Seymour Smith & Son Inc
Torco Equipment Co
Union Fork & Hoe Co
D J Wilson Co
Hermann A Wirth

Pumps

Agro Chem Inc
Agrotec Inc
Aquaturf
Barnant Co
John Blue Co
Bowie Industries Inc
Broyhill Co
Citrus Systems Inc
Clinton Engines Corp
Encap Products Co
FMC Corp Agricultural Mach Div
Ford Motor Co Tractor Operations
Friend Mfg Corp
Hanson Equipment Co
Homelite Div Textron Inc
Hotsy Corp
H D Hudson Mfg Co Professional Prods Div
Hydroflo Corp
Hypro Div Lear Siegler Inc
Inject-O-Meter Mfg Co
Jaeco Pump Co
Kembro Inc
Little Giant Pump Co Sub Tecumseh Prods Co
Master Sprayers Inc
Minnesota Wanner Co
Otterbine-Barebo Inc
Parco Div Blue Mountain Prod Inc
Peerless Pump
Power Spray Technology Inc
Smithco Inc
Stanley Hydraulic Tools
Strong Ent Inc
Trees Inc
Tuflex Mfg Co
Westheffer Co

Rakes, Landscape

Bartlett Mfg Co
Ford Motor Co Tractor Operations
Fuerst Brothers Inc
Glenmac Inc
International Reforestation Suppliers Inc
Kenyon Mfg Inc
Professional Turf Specialties
Roseman Mower Corp
Rugg Mfg Co
Standard Golf Co
Union Fork & Hoe Co
Yanmar Tractor (USA) Inc
York Rakes Div York Modern Corp

Rock Pickers

Glenmac Inc

Rollers, Lawn

Brouwer Turf Equipment Ltd
Gandy Co
Jackson Mfg Co
Northeast Industries Inc

Rope

Bartlett Mfg Co
Halls Safety Equipment Inc
Power Lawnmower Parts Inc
Safety Test & Equipment Co
Samson

Safety Wear & Equipment

Bartlett Mfg Co
Edmont Div Becton Dickinson & Co
Fox Valley Marking Systems Inc
Halls Safety Equipment Inc
Norton Co Safety Products Div
Power Lawnmower Parts Inc
Safety Test & Equipment Co

Saws

Bartlett Mfg Co
Citrus Systems Inc
Fairmont Hydraulics
Friend Mfg Corp
Halls Safety Equipment Inc
Hinds Int'l Inc
Limb-Lopper Div/Robinson Ind
Milwaukee Electric Tool Corp
Safety Test & Equipment Co
Skil Corp
Seymour Smith & Son Inc
Stanley Hydraulic Tools
Union Fork & Hoe Co

Scrapers

Eversman Mfg Co
International Harvester Co
Little Giant Products Inc
Union Fork & Hoe Co
York Rakes Div York Modern Corp

Screeners

Glenmac Inc
Lindig Mfg Corp
Royer Foundry & Machine Co

Seeders

Bowie Industries Inc
Brillion Iron Works
Central Quality Industry Inc
Cyclone Seeder Co
Erocon Pacific Corp
Herd Seeder Co
Jacobsen Div Textron Inc
Lambert Corp
Lawnmaker Mfg Co
Meredith Seed Miser
Professional Turf Specialties
O M Scott & Sons Proturf Div
Vaughan's Seed Co
Vicon Farm Machinery Inc

Seeders, Hydraulic

Bowie Industries Inc
Cushman Turf/OMC Lincoln
Erocon Pacific Corp
Finn Corp
Friend Mfg Corp
Reinco Inc
Solarcell Land & Bldg Inc

Shears

American Standard Co
Deere & Co
Friend Mfg Corp
Limb-Lopper Div/Robinson Ind
Safety Test & Equipment Co
Seymour Smith & Son Inc
Stanley Hydraulic Tools
Union Fork & Hoe Co
D J Wilson Co
Hermann A Wirth

Shelters

Bally Case & Cooler Inc
Koppers Co
Miracle Recreation Equipment Co
Poligon Div W H Porter Inc

Snow Blowers

American Honda Motor
Ariens Co
Atlas Tool & Mfg Co
Roscoe Brown Corp
Bunton Co
Cushman Turf/OMC Lincoln
Deere & Co
Excel Industries Inc
Ford Motor Co Tractor Operations
Gilson Brothers Co
Goodall Div Bunton Co
Gravely
Haban Mfg Co
Hanson Equipment Co
International Harvester Co
Kubota Tractor Corp
Lawn-Boy Product Group
Little Giant Products Inc
MTD Products Inc
Howard Price Turf Equip
Professional Turf Specialties
Ransomes Inc
Steiner Corp
Sweepster
Toro Co Commercial Prods
Yanmar Tractor (USA) Inc
Yazoo Mfg Co

Snow Plows

Ariens Co
Roscoe Brown Corp
Bunton Co
Clark Equipment Co Melroe Div
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Goodall Div Bunton Co
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Swenson Spreader Co
Toro Co Commercial Prods
Western Products

Sod Cutters

Beck Mfg Co
Brouwer Turf Equipment Ltd
Guest Industries Inc
Ryan Turf/OMC Lincoln
Turfco Mfg Inc

Sod Equipment

Brouwer Turf Equipment Ltd
Fuerst Brothers Inc
Raverty's Sod Blades

Sod Harvester

Beck Mfg Co
Brouwer Turf Equipment Ltd
Nunes Mfg
Princeton Mfg Co

Soil Fumigation

Hendrix & Dail Inc

Soil Mixers

American Trencher
Howard Rotovator Co
Lindig Mfg Corp
Royer Foundry & Machine Co
Trees Inc

Soil Moisture Sensing Equipment

Irrometer Co

Soil Sampler

Agro Chem Inc
Clements Associates Inc
Lakeshore Equipment & Supply Lesco Prods
La Motte Chemical Products Co
P E Skaling Soilmoisture Equipment Corp
Sudbury Laboratory Inc
Turfgrass Products
Westheffer Co

Soil Shredders

American Trencher
Lindig Mfg Corp
Royer Foundry & Machine Co
W-W Grinder Inc

Soil Test Labs

Agro Chem Inc
Encap Products Co
Hach Co
Hellige Inc
La Motte Chemical Products Co
O M Scott & Sons Proturf Div
Sudbury Laboratory Inc
Vaughan's Seed Co

Soil Test Meters

Agro Chem Inc
Howard S Crane Inc
Hellige Inc
Kel Instruments Co
La Motte Chemical Products Co
P E Skaling Soilmoisture Equipment Corp
Sudbury Laboratory Inc

Sprayers

Agro Chem Inc
Agrotec Inc
Bartlett Mfg Co
B & G Equipment Co
John Blue Co
Broyhill Co
Buffalo Turbine Agricultural Equip Co
Laurie Carlson & Assoc
Citrus Systems Inc
Cushman Turf/OMC Lincoln
Dedoes Industries Inc
Echo Inc
E-Z-Go Golf Car
E-Z Rake Inc
Finn Corp
FMC Corp Agricultural Mach Div
Friend Mfg Corp
Hahn Inc
Hanson Equipment Co
H D Hudson Mfg Co Professional Prods Div
International Reforestation Suppliers Inc
Liqui*Lawn Corp
Marco Sprayers
Maruyama Corp of America
Master Mfg Co
Master Sprayers Inc
Melnor Industries
Micron Corp
Minnesota Wanner Co
F E Myers Co
Parco Div Blue Mountain Prod Inc
Power Spray Technology Inc
Professional Turf Specialties
Reinco Inc
RIGO Co
Smithco Inc
Solo Inc
Sorensen Sprayers Inc
Strong Ent Inc
Strong Mfg Co
Torco Equipment Co
Tuflex Mfg Co
Universal-Gerwin Div Leigh Products Inc
Vandermolen Corp
Westheffer Co
Wheel Spray Corp
W-W Grinder Inc

Spray Guns

Agro Chem Inc
Agrotec Inc
Citrus Systems Inc
Encap Products Co
FMC Corp Agricultural Mach Div
Friend Mfg Corp
Hanson Equipment Co
H D Hudson Mfg Co Professional Prods Div
Hypro Div Lear Siegler Inc
Lakeshore Equipment & Supply Lesco Prods
Marco Sprayers
Master Mfg Co
Master Sprayers Inc
Melnor Industries
Minnesota Wanner Co
F E Myers Co
Parco Div Blue Mountain Prod Inc
Power Spray Technology Inc
Professional Turf Specialties
Smithco Inc
Spraying Systems Co
Strong Ent Inc
Torco Equipment Co
Tri-Con Inc
Tuflex Mfg Co
Westheffer Co

Spray Units

Agro Chem Inc
Agrotec Inc
B & G Equipment Co
Broyhill Co
Citrus Systems Inc
Finn Corp
FMC Corp Agricultural Mach Div
Friend Mfg Corp
Hanson Equipment Co
Hill's Liqui-Systems
H D Hudson Mfg Co Professional Prods Div
Lakeshore Equipment & Supply Lesco Prods
Marco Sprayers
Master Mfg Co
Master Sprayers Inc
Minnesota Wanner Co
Parco Div Blue Mountain Prod Inc
Power Spray Technology Inc
Professional Turf Specialties
Smithco Inc
Strong Ent Inc
Torco Equipment Co
Tuflex Mfg Co
Westheffer Co

Spray Units, Mixer Proportioners

Young Industries

Spreaders

Arctic Mizer Manufacturers
John Blue Co
Brinly-Hardy Co
Central Engineering Co
Central Quality Industry Inc

Cushman Turf/OMC Lincoln
E-Z-Go Golf Car
Gandy Co
Hahn Inc
Herd Seeder Co
Highway Equipment Co
F D Kees Mfg Co
Lakeshore Equipment & Supply Lesco Prods
Precision Products Inc
Professional Turf Specialties
O M Scott & Sons Proturf Div
Seymour Mfg Co
Sta-Green Plant Food Co
Swenson Spreader Co
Trac N Combo
Vandermolen Corp
Vicon Farm Machinery Inc
Western Products
Wheel Spray Corp

Sprig Planters

Beck Mfg Co
Finn Corp

Straw Blowers

Bowie Industries Inc
Finn Corp
Reinco Inc

Stump Cutters

Heckendorn Mfg Co
Olathe Mfg Inc
Promark Products Inc
Vermeer Mfg Co

Sweepers

American Trencher
Ariens Co
Atwater Strong Div
Billy Goat Industries Inc
Brinly-Hardy Co
Roscoe Brown Corp
Central Engineering Co
Giant Vac Mfg Inc
Grasshopper Co
Gravely
Jacobsen Div Textron Inc
Lambert Corp
Little Giant Products Inc
MTD Products Inc
Olathe Mfg Inc
Parker Sweeper Co
Precision Products Inc
Howard Price Turf Equip
Reinco Inc
Steiner Corp
Sweepster
Tennant Co
Toro Co Commercial Prods
Turf Vac Corp
Yard Vac Prods Inc
Yazoo Mfg Co

Tanks, Fiberglass

Agro Chem Inc
Agrotec Inc
Broyhill Co
Citrus Systems Inc
Fiberglass Unlimited Inc
Friend Mfg Corp
Hanson Equipment Co
Hydroflo Corp
Jaeco Pump Co
Kay Park Rec Corp
Marco Sprayers
Master Sprayers Inc
F E Myers Co
Power Spray Technology Inc
Smithco Inc
Sorensen Sprayers Inc
Strong Ent Inc
Tuflex Mfg Co
Westheffer Co

Tanks, Metal

John Blue Co
Broyhill Co
Citrus Systems Inc
Clinton Engines Corp
Finn Corp
FMC Corp Agricultural Mach Div
Friend Mfg Corp
H D Hudson Mfg Co Professional Prods Div
Hydroflo Corp

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Kay Park Rec Corp
Lakeshore Equipment & Supply Lesco Prods
Minnesota Wanner Co
Strong Ent Inc
Universal-Gerwin Div Leigh Products Inc
Westheffer Co

Tool Boxes

Deere & Co
International Reforestation Suppliers Inc
Nevr-Rust Tool-Tainer Inc
Reading Body Works Inc
Rotocast Plastic Products Inc

Topdresser

John Blue Co
Cushman Turf/OMC Lincoln
E-Z-Go Golf Car
Hahn Inc
Olathe Mfg Inc
Professional Turf Specialties
Turfco Mfg Inc
Vicon Farm Machinery Inc

Tractors & Attachments

American Trencher
Ariens Co
Atwater Strong Div
Roscoe Brown Corp
Bunton Co
J I Case
Custom Products of Litchfield Inc
Deere & Co
Engineering Products Co
FMC Bolens Corp
Ford Motor Co Tractor Operations
Gilson Brothers Co
Goodall Div Bunton Co
Gravely
Guest Industries Inc
Haban Mfg Co
Hefty Tractor Co
International Harvester Co
Jacobsen Div Textron Inc
Kubota Tractor Corp
Little Giant Products Inc
Long Mfg NC Inc
McMillen Div
Mitsubishi AG Machinery Co Ltd
Morbark Industries Inc
MTD Products Inc
Ransomes Inc
Steiner Corp
Tiger Corp
Toro Co Commercial Prods
UTECO Inc
Wheel Horse Products Inc
Yamaha Motor Corp
Yanmar Tractor (USA) Inc

Trailers

Ariens Co
John Blue Co
Bock Industries Inc
Deere & Co
E-Z-Go Golf Car
Giant Vac Mfg Inc
Handy Mandy Mfg
Holsclaw Brothers Inc
Jacobsen Div Textron Inc
Kut-Kwick Corp
Lifetime Products
Magline Inc
Marco Sprayers
Olathe Mfg Inc
Precision Products Inc
Rivlex Industries Inc
Smithco Inc
Snowco
Steiner Corp
Trans-Tree Corp

Traps, Animal

International Reforestation Suppliers Inc
Woodstream Corp

Tree Movers

Big John Tree Transplanter Mfg Inc
Caretree Systems Inc
Clark Equipment Co Melroe Div
Clegg Nursery Equipment
Schutt's Equipment Co
Trans-Tree Corp

Tree Movers, Spades

Big John Tree Transplanter Mfg Inc
Caretree Systems Inc
Mechanical Transplanter Co
Rokor Inc
Trans-Tree Corp
Vermeer Mfg Co

Tree Protectors

Deep Root Corp

Tree Wrap

General Bandages Inc

Trenchers

American Trencher
Roscoe Brown Corp
J I Case
J I Case Drott Div
Clark Equipment Co Melroe Div
Ditch Witch Div Charles Machine Works
Ford Motor Co Tractor Operations
Ground Hog Inc
Seaman Co
Vermeer Mfg Co

Trimmers, Line

Bartlett Mfg Co
Black & Decker Mfg Co
Bunton Co
Deere & Co
Echo Inc
Goodall Div Bunton Co
Halls Safety Equipment Inc
HMC/Green Machine
Hoffco Inc
Homelite Div Textron Inc
Lawn-Boy Product Group
Limb-Lopper Div/Robinson Ind
Poulan/Weed Eater
Power Lawnmower Parts Inc
Safety Test & Equipment Co
Seymour Smith & Son Inc
Stihl Inc
Toro Co Commercial Prods

Truck Bodies

John Blue Co
Chevrolet Motor Div
Handy Mandy Mfg
Henderson Mfg Div Waycrosse Inc
International Reforestation Suppliers Inc
La Font Corp
Opdykes Truck Sales
Pitman Div
Reading Body Works Inc
Rokor Inc
Strong Ent Inc

Turf Blocks

Presto Products Inc
Turfgrass Products

Vacuums

Atwater Strong Div
Billy Goat Industries Inc
Central Engineering Co
Echo Inc
E-Z Rake Inc
Giant Vac Mfg Inc
Lambert Corp
MTD Products Inc
Nunes Mfg
Parker Sweeper Co
Turf Vac Corp
Woods Div Hesston Corp
Yard Vac Prods Inc

Vehicles, Turf

Agro Chem Inc
Bajaj America Inc
Cushman Turf/OMC Lincoln
Eagle Vehicles Inc
E-Z-Go Golf Car
Hahn Inc
F E Myers Co
Olathe Mfg Inc
Professional Turf Specialties
Rivlex Industries Inc
Smithco Inc
Toro Co Commercial Prods
Yamaha Motor Corp

Vibratory Plows

J I Case
J I Case Drott Div
Ditch Witch Div Charles Machine Works
Seaman Co
Turfco Mfg Inc
Vermeer Mfg Co

2. Equipment Companies

★ Advanced Drainage Systems Inc
3300 Riverside Dr
Columbus OH 43221
614-457-3051

Ag-Rain Inc
600 S Schrader
Havana IL 62644
309-543-4425

Agro Chem Inc
11150 Addison
Franklin Park IL 60131
312-455-6900

Agrotec Inc
Spearin Rd
PO Box 215
Salisbury MD 21801-0215
301-749-8496

Algoma Net Co-Div Gleason Corp
1525 Mueller St
Algoma WI 54201
414-487-5577

Alpina North America
Box 112
Northport WA 99157
604-367-9202

Al's Machine Shop
See AMS Inc

American Enka Co
See Enkamat Div American Enka Co

American Honda Motor Co
100 W Alondra Blvd
Gardena CA 90247
213-327-8280

American Playground Device Co
1801-31 S Jackson St
PO Drawer 2599
Anderson IN 46011
317-642-0288

American Stamp Co
PO Box 741
Reseda CA 91335
213-881-2808

American Standard Co
One West St
Plantsville CT 06479
203-628-9643

American Trencher
503 Gay St
Delhi IA 52223
319-922-2981

AMETEK/Plymouth Prods Div
502 Indiana Ave
Sheboygan WI 53081
414-457-9435

AMS Inc
1515 Fayette
El Cajon CA 92020
714-449-8570

Anchor/Swan Corp
PO Box 509
Worthington OH 43085
614-548-6511

Aquamarine Corp
PO Box 616
Waukesha WI 53186
414-547-0211

Aquatic Irrigation Systems Inc
619 E Gutierrez St Ste E
Santa Barbara CA 93103
805-965-5125

Aquatrols Corp of America
1432 Union Ave
Pennsauken NJ 08110
609-665-1130; 800-257-7797

Aquaturf
11363 San Jose Blvd
Jacksonville FL 32217
904-268-6707

Arctic Mizer Manufacturers
2120 E Norwich St
St Francis WI 53207
414-744-4160

Ariens Co
655 W Ryan St
Brillion WI 54110
414-756-2141

Asplundh Mfg Div
50 E Hamilton St
Chalfont PA 18914
215-822-0542

Atlas Tool & Mfg Co
7100 S Grand Ave
St Louis MO 63111
314-353-7800

★ Atwater Strong Div
6284 Waterloo Rd
Atwater OH 44201
216-947-2344

Auburn Consolidated Industries Inc
Box 250
Auburn NE 68305
402-274-4911

Auto Crane Co
9260 Broken Arrow Expressway
Tulsa OK 74145
918-627-9475

Bajaj America Inc
1237 Gadsden St
Columbia SC 29201
803-779-5361

Bally Case & Cooler Inc
PO Box 98
Bally PA 19503-0098
215-845-2311

Barnant Co
28W92 Commercial Ave
Barrington IL 60010
312-381-7050

Bartlett Mfg Co
3003 E Grand Blvd
Detroit MI 48202
313-873-7300

Beaird-Poulan/Weed Eater
See Poulan/Weed Eater

Beck Mfg Co
1510 Pumphrey Ave
PO Box 2014
Auburn AL 36830
205-821-4600

B & G Equipment Co
Applebutter Rd
Plumsteadville PA 18949
215-766-8811

Big John Tree Transplanter Mfg Inc
PO Box 608
Heber Springs AR 72543
501-362-8161

BigToys
3113 S Pine St
Tacoma WA 98409
206-572-7611

Billy Goat Industries Inc
PO Box 308
Lee's Summit MO 64063
816-524-9666

Black & Decker Mfg Co
701 E Joppa Rd
Towson MD 21204

BlueBird Int'l Inc
2778 S Tejon
Englewood CO 80110
303-781-4458

John Blue Co
2800 Bob Wallace Ave
Huntsville AL 35805
205-536-5581

Bock Industries Inc
57540 SR 19 S
PO Box 1027
Elkhart IN 46515
219-295-8070

Bombardier Ltd
Valcourt PQ J0E 2L0
Canada
514-532-2211

★ Bowie Industries Inc
PO Box 931
Bowie TX 76230
817-872-2286

Briggs & Stratton Corp
PO Box 702
Milwaukee WI 53201
414-259-5333

Equipment Companies

continued

Brillion Iron Works
7200 Park Ave
Brillion WI 54110
414-756-2121

Brinly-Hardy Co
PO Box 1116
Louisville KY 40201
502-585-3351

Brouwer Turf Equipment Ltd
Woodbine Ave, R R 2
Keswick ON L4P 3E9 CN
416-476-4311

Roscoe Brown Corp
PO Box 108
Boys Town NE 68010
402-333-9030

Broyhill Co
N Market Square
Dakota City NE 68731
402-987-3412

Buck Haven Industries Inc
Kendrick's Bldg
Box 112
Northport WA 99157
604-367-7822

Canadian Div
Waneta Rd
Box 337
Trail BC V1R 4L6 CN
604-367-9202

Buffalo Turbine Agricultural Equipment Co
Industrial Place
PO Box 150
Gowanda NY 14070
716-532-2272

★ Bunton Co
601 E Indian Trail
Louisville KY 40213
502-966-0550

Bush Hog Div Allied Prods Corp
PO Box 1039
Selma AL 36701
205-872-6261

Cambridge Soil Services of America
106 Robert Gene
Glencoe AL 35905
205-492-7847

Caretree Systems Inc
160 Outerbelt St
Columbus OH 43213
614-861-7775

Laurie Carlson & Assoc
PO Box 1465
Madison WI 53701
608-849-4770

J I Case
700 State St
Racine WI 53404
414-636-6011

J I Case Drott Div
PO Box 1087
Wausau WI 54401
715-359-6511

Caterpillar Lift Trucks
Mfg by Towmotor Corp
7800 Tyler Blvd
Mentor OH 44060
216-255-5611

Caterpillar Tractor Co
100 NE Adams
Peoria IL 61528

Central Engineering Co
4429 W State St
Milwaukee WI 53208
414-933-4567

Central Quality Industry Inc
900 S Division
Polo IL 61064
815-946-2311

Champion Brass Mfg Co
1406 N Naud St
Los Angeles CA 90012
213-221-2108

★ Champion Sprinkler Mfg Co
1460 N Naud St
Los Angeles CA 90012
213-221-2108

A B Chance Co
210 N Allen St
Centralia MO 65240
314-682-8233

Chapin Watermatics Inc
Box 298
Watertown NY 13601

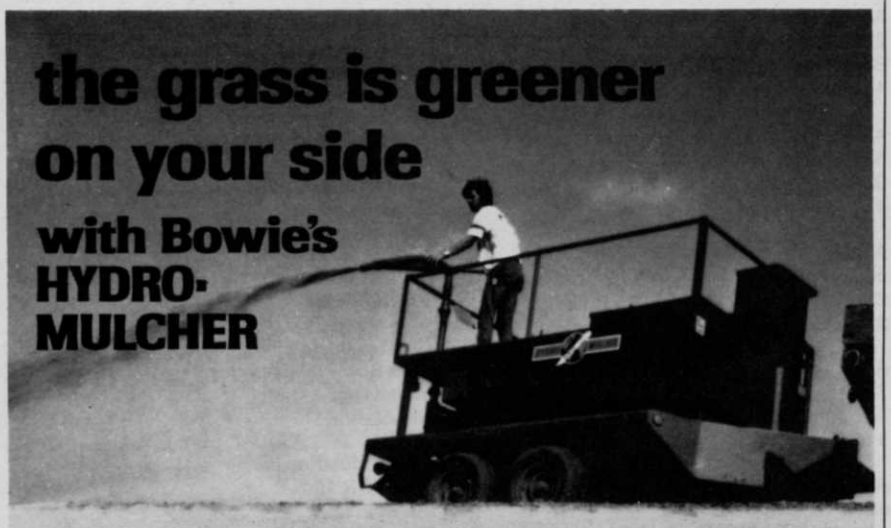
Chemilizer Products Inc
12745 49th St N
Clearwater FL 33520
813-576-7211

Chevrolet Motor Div
30007 Van Dyke Ave
Warren MI 48090
313-492-5573

Chipmore Mfg Co
PO Box 671
Bay City MI 48707
517-894-4578

J A Cissel Co
PO Box 339
Farmingdale NJ 07727
201-938-6600

Citrus Systems Inc
1300 E Hwy 50
Winter Garden FL 32787
305-656-6858



For fast, easy turf establishment—the Bowie Hydro-Mulcher is the answer. The one-step operation of a Bowie Hydro-Mulcher plants, seeds, sprigs, fertilizes, waters, sprays and mulches. And with a Bowie Hydro-Mulcher, you can seed over three acres in fifteen minutes. That saves you valuable time and money! Order the Bowie Hydro-Mulcher—you'll have the best and greenest—on your side!

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BOWIE INDUSTRIES, INC.

P.O. Box 931 Bowie, Texas 76230 · (817) 872-2286

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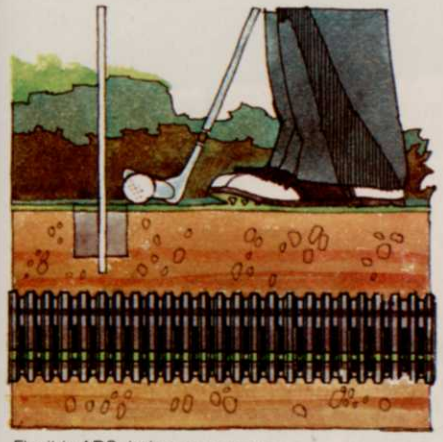
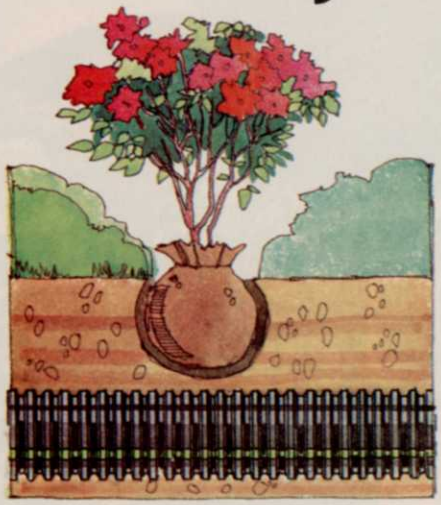
ADS Drainage Tubing

It's dependably tough for your toughest turf jobs.

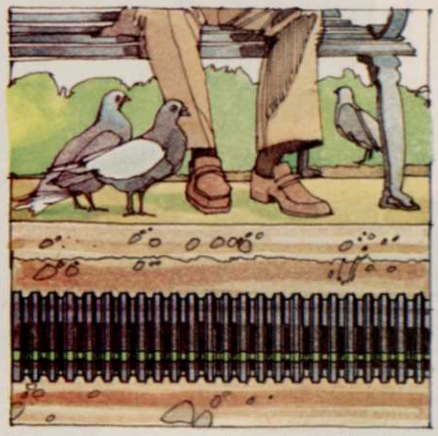


Flexible ADS drains your greens.



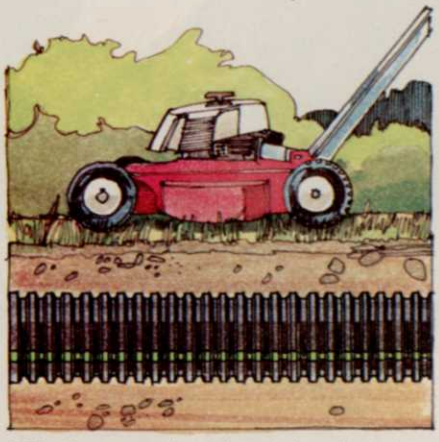
ADS helps maintain beautiful landscapes.

ADS keeps your athletic fields dry.



ADS controls water runoff in heavily trafficked areas.

Sandy soils call for ADS Drain Guard®—the nylon filter that won't block or clog.



ADS tubing—a small part of your turf care budget.

Whether you buy or sell turf care products, you want quality. That's why ADS polyethylene tubing is your best bet. For healthy soil, drainage is important. Strong and durable, ADS tubing provides years of trouble-free drainage, and helps maintain stable soil systems.

ADS is easy to install, requiring less labor and no heavy machinery. A flexible tubing, it follows ground contours and adapts to underground obstacles. And, ADS tubing won't rot, rust or break down during handling or backfilling. A full line of accessory fittings and couplings help simplify even the most challenging installations.

At a cost of just pennies per foot, ADS means quality AND value.

This season rely on ADS drainage tubing. You deserve the best.

SPECIFICATIONS

ASTM F-405, Standard Specification for Corrugated Polyethylene Tubing and Fittings. **SCS,** National Engineering Standard, Code 606. **ASTM F-667,** Standard Specification for 10", 12" and 15" Corrugated Polyethylene Tubing.

Look for the ADS green stripe

It's your sign of quality—#1 in the land.

To serve your drainage needs, ADS operates 21 manufacturing plants nationwide, and the eight regional sales offices listed below:

Madera, CA	209-674-0903
Iowa City, IA	319-338-3689
Bellevue, WA	206-643-2770
Monticello, IL	217-762-9448
Atlanta, GA	404-393-0602
Napoleon, OH	419-599-0585
Livermore, KY	502-733-4324
Palmer, MA	413-283-9797

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ADS®

ADVANCED DRAINAGE SYSTEMS, INC.

Corporate Office
3300 Riverside Drive
Columbus, Ohio 43221
(614) 457-3051

For additional product and technical information, contact your nearest ADS sales office.

CUSHMAN® FRONT

LINE.

SIX GOOD REASONS TO MAKE IT YOUR FIRST CHOICE.

1 Plenty of power, plus economy.

Choose either the 18-hp OMC® air-cooled engine or the 4-cycle water-cooled diesel. Both deliver the power and performance you need. The Front Line mower is designed from the engine up, not from the tractor down, so every working component complements the power plant.

2 Fast, maneuverable, simple operation.

Hydrostatic drive and wheel-type steering make operation easy. Single rear turning wheel, and split front-wheel traction-assist pedals allow smooth, zero-turning radius; the driver's hands stay on the wheel. Mechanical clutch direct-drive PTO gives you a powerful tractor that's built to take it.

3 The cleanest of cuts.

The three heat-treated blades with air-lifts along with the Cushman deck and baffle design cut the grass cleanly. Clippings are lifted up and discharged out the chute evenly, eliminating the blade drag that eats up power. Choose a 60″ or 72″ deck; both offer top-mounted grease fittings and covers that remove with just two wing nuts. The 72″ deck also comes with wash-out holes so collected debris can be flushed out during normal maintenance.

4 No scalping.

Rear deck rollers work along with the front wheels to keep the deck and blades off the ground, even over rough terrain. Springs are also available to absorb deck weight and allow the deck to "float" with the contour of the ground. (These anti-scalp packages are optional, depending on the contours of your particular turf.)

5 Year-round versatility.

The Cushman Front Line doesn't go out of service when the mowing season is over. It can work for you all year 'round when you add accessories like the ROPS structure and weathertite cab, 60″ rotary broom (gas unit only) and the 48″ snow thrower.

6 Service when you need it.

Your Cushman Front Line dealer stocks parts for the engines, tractors and decks, and services the entire unit. He's an experienced, thoroughly trained professional, dedicated to keeping your Front Line mower in service.

For a free on-site demonstration of the Front Line quality, contact a Cushman Front Line dealer today. Or call us at 402-435-7208 for the location of your nearest dealer.

CUSHMAN® FRONT LINE.™

It stands to reason.

3111 Cushman, P.O. Box 82409
Lincoln, NE 68501

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CUT2-5780

The HUSTLER SOLUTION

to All Season Productivity.

A full line of attachments keeps your HUSTLER working all year 'round.

Thanks to its quick-hitch capability and 15 different attachments, your return on an investment in a HUSTLER tractor can be maximized.

SPRING & SUMMER ATTACHMENTS: ***3-Way Mower Deck*** mulches or discharges to the side, rear or both; ***Coulter-Type Edger*** for sharp, professional trim; ***Grass Catcher/Compactor*** for clean lawns; ***Grass Vac*** (261 only); ***72" Heavy Duty Deck; 60" Flail Mower*** for roadside jobs and thickly weeded areas.

FALL & WINTER ATTACHMENTS: ***Rotary Broom*** for debris or light snow; ***54" or 60" Snow Throwers; 60" V-Blade; 60" or 72" Dozer Blades; or 1/2 cu. yd. Utility Scoop.***

ROPS, ROPS/Cab, headlights, heater and tilt-deck trailer also are available for HUSTLER models.

All HUSTLER attachments are designed for total grounds maintenance care. The HUSTLER simply does it all!

Call Toll Free 1-800-835-3260 or write for FREE literature. EXCEL INDUSTRIES, INC. Box 727 / Hesston, KS 67062

EXI 4-582

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Dozer Blades

Rotary Broom

3-Way Deck

Coulter-Type Edger

Snow Thrower

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"BacVac" Grass Vacuum (Model 261 only)
Grass Catcher/Compactor
72" Heavy Duty Deck
60" Flail Mower
V-Blade
ROPS
ROPS/Cab
Headlights
Heater
Tilt Deck Trailer

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EXCEL HUSTLER Turf & Grounds Equipment

Call toll free 1-800-835-3260

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Fargo ND 58102
701-293-3220

Clean City Squares Inc
PO Box 6797
St Louis MO 63144
800-325-3048

Clean-Flo Laboratories Inc
4342 Shady Oak Road
Hopkins MN 55343
800-328-6656; 612-935-2137

Clegg Nursery Equipment
Box 252
Plainfield IL 60544
815-436-2357

Clements Associates Inc
RR 1 Box 162A
Newton IA 50208
515-792-8285

Clinton Engines Corp
Clark & Maple Sts
Maquoketa IA 52060
319-652-2411

Club Car Inc
PO Box 4658
Augusta GA 30907

Columbia Car Corp
3110 International Ln
Madison WI 53704

Columbia Cascade Timber
1975 SW Fifth Ave
Portland OR 97201
503-223-1157

Continental Custom Bridge Co
Rt 5 Box 178
Alexandria MN 56308
612-852-7500

Conwed Corp
PO Box 43237
St Paul MN 55164
612-221-1100

Correct Mfg Corp
London Road Extension
Delaware OH 43015
614-363-1951

Howard S Crane Inc
Box 88
Oneida NY 13421
315-363-3390

★ Cushman Turf/OMC Lincoln
PO Box 82409
Lincoln NE 68501
402-435-7208

Custom Products of Litchfield Inc
Box 718
Litchfield MN 55355
612-693-3221

Cyclone Seeder Co
PO Box 1649
Harrisburg PA 17105
717-234-6291

Ross Daniels Inc
1720 Fuller Road
West Des Moines IA 50265
515-225-6471

Dayni Controls Mfg Co
18414 Eddy St
Northridge CA 91325
213-349-8367

Dedoes Industries Inc
1060 W West Maple
PO Box 575
Walled Lake MI 48088
313-624-7710

Deep Root Corp
7354 Bolsa Ave
Westminster CA 92683
714-898-0563

Deere & Co
John Deere Rd
Moline IL 61265
309-752-8000

Delavan Corp
811 Fourth St
West Des Moines IA 50265
515-274-1561

Delmarva Textile Co
254 N Rehoboth Blvd
Milford DE 19963
302-422-7531

Dema Engineering Co
10020 Big Bend Blvd
St Louis MO 63122
314-966-3533

Devpro Machine Inc Insectocutor Div
PO Box 46
Middleport NY 14105-0046
716-735-7768

Didier Mfg
8630 Industrial Dr
Franksville WI 53126
414-886-0525

★Ditch Witch Div Charles Machine Works
PO Box 66
Perry OK 73077
800-654-6481

Dragon Irrigation Equipment by Wes-Co
910-23rd Ave
Oakland CA 94606
415-534-3320

Dynamic Industries (Swinger)
201 W Main
Barnesville MN 56514
218-354-2211

Eagle Vehicles Inc
8181 Hoyle Ave
Dallas TX 75227
214-388-7431

Echo Inc
3150 MacArthur Blvd
Northbrook IL 60062
312-291-2819

Edmont Div Becton Dickinson & Co
1300 Walnut St
Coshocton OH 43812
614-622-4311

Edwards Equipment Co
4312 Main St
Yakima WA 98903
509-248-1770

Electric Carrier Corp
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San Antonio TX 78209

Ellis Mfg Co
107 W Railroad St
PO Box 246
Verona WI 53593
608-845-6472

Encap Products Co
PO Box 278
Mt Prospect IL 60056
312-593-6464

Engineering Products Co (Power King)
2021 MacArthur Rd
PO Box 1510
Waukesha WI 53187
414-547-5558

Erocon Pacific Corp
PO Box 506
Enumclaw WA 98022
206-825-7217

Erosion Control Systems/Gulf States Paper Corp
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Tuscaloosa AL 35404
205-553-6200

Eversman Mfg Co
PO Box 4345
Denver CO 80204
303-572-1140

★Excel Industries Inc
PO Box 727
Hesston KS 67062
316-327-4911

Exide Corp
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Horsham PA 19044
215-674-9500

★E-Z-Go Golf Car
Marvin Griffin Rd
PO Box 388
Augusta GA 30913-2699
404-798-4311

E-Z Rake Inc
1001 S Ransdell Rd
Lebanon IN 46052
317-482-1662

Fairmont Hydraulics Div Fairmont Railway Motors-Harsco Corp
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Fairmont MN 56031
507-235-3361

Feldmann Engineering & Mfg Co
633 Monroe St
Sheboygan Falls WI 53085
414-467-6167

Fert-O-Ject
4701 Old San Jose Rd
Santa Cruz CA 95065
408-475-5122
Mail To: PO Box 889
Soquel CA 95073

Fiberglass Unlimited Inc
S Hwy 81
PO Box 1297
Watertown SD 57201
605-886-5137

Finn Corp
2525 Duck Creek Rd
Cincinnati OH 45208
513-871-2529

Flexitube International Corp
PO Box 292
Willow Grove PA 19090
215-674-8036

Florian Pruners
797 Mott Hill Rd
South Glastonbury CT 06073

FMC Bolens Corp
215 S Park St
Port Washington WI 53074

FMC Corp Agricultural Machinery Div
5601 E Highland
Jonesboro AR 72401
501-935-1970

Ford Motor Co Tractor Operations
2500 E Maple Rd
Troy MI 48084
313-643-2000

Foresight Industries Inc
2114 Pioneer Ave
PO Box 4067
Cheyenne WY 82001
307-635-4163

Fox Valley Marking Systems Inc
172 S Northwest Hwy
Cary IL 60013
312-639-5744; 800-323-4770

Francesville Drain Tile Corp
PO Box 368
Francesville IN 47946
219-567-9133

Friend Mfg Corp
4441 Prospect St
Gasport NY 14067
716-772-2622

Fuerst Brothers Inc
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Oregon IL 61061
815-732-3239

Gandy Co
528 Gandrud Rd

Equipment Companies

continued

Owatonna MN 55060
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General Bandages Inc
8300 Lehigh Ave
Morton Grove IL 60053
312-966-8383

Giant Vac Mfg Inc
Machine Shop Rd
South Windham CT 06266
203-423-7741

Gilson Brothers Co
Box 152
Plymouth WI 53073
414-893-1011

Glenmac Inc
1805 Second Ave SW
PO Box 1398
Jamestown ND 58401
800-437-9779; 710-252-9300

Go-Fore
8228 Goldie St
Walled Lake MI 48088

Goodall Div Bunton Co
4601 E Indian Trail
Louisville KY 40213
502-459-0550

Gould
Ten Gould Center
Rolling Meadows IL 60008
312-640-4000

Grand Rock Co
8805 East Ave
Mentor OH 44060
216-951-1967

★ Grasshopper Co
PO Box 637
Moundridge KS 67107
316-345-8621

Grass Pavers Ltd
3807 Crooks
Royal Oak MI 48073
313-549-4046

Gravely
One Gravely Ln
Clemmons NC 27012
919-766-4721

Ground Hog Inc
25010 E Fifth St
San Bernardino CA 92410
714-888-2818

GTE Sylvania
100 Endicott St
Danvers MA 01923
617-777-1900

Guest Industries Inc
3601 Winsted Rd
Torrington CT 06790-2297
800-243-5390

Haban Mfg Co
2100 Nothwestern Ave
Racine WI 53404
414-637-8388

Hach Co
PO Box 389
Loveland CO 80539
800-525-5940

Hahn Inc
1625 N Garvin St
Evansville IN 47711
812-428-2020

Halls Safety Equipment Inc
Box 230
Grove City PA 16127
412-458-7202

Hancor Inc
401 Olive St
Findlay OH 45840
419-422-6521

Handy Mandy Mfg
319 S Seventh
Perry OK 73077
405-336-5222

Clifford B Hannay & Son Inc
422 Maple St
Westerlo NY 12193
518-797-3791

Hanson Equipment Co
301 Charles St
South Beloit IL 61080
815-389-2261

Harley-Davidson
See Columbia Car Corp

Delmer F Harris Co
517 Broadway
PO Box 278
Concordia KS 66901
913-243-3321

Heckendorn Mfg Co
Box 88
Cedar Point KS 66843
316-274-4201

Hefty Tractor Co
Cross & Industrial Sts
PO Box 188
Juneau WI 53039
414-386-2401

Hellige Inc
877 Stewart Ave
Garden City NY 11530

Henderson Mfg Co
1085 S Third
Manchester IA 52057
319-927-2828

Hendrix & Dail Inc
803 Industrial Blvd
PO Box 648
Greenville SC 27834
919-758-4263

Herd Seeder Co
3600 E US 35 SE
PO Box 448
Logansport IN 46947
219-753-6311

Highway Equipment Co
616 D Ave NW
Cedar Rapids IA 52405
319-363-8281

Hill's Liqui-Systems
Victoria TX 77901

Hinds Int'l Inc
700 NE Multnomah Ste 1450
Portland OR 97232
503-234-7411

HMC/Green Machine
20710 S Alameda
Long Beach CA 90810
213-603-9888

Hockney Under Water Weed Cutters
913 Cogswell
Silver Lake WI 53170
414-889-4581

Hoechst Fibers Industries Spunbond Business Group
PO Box 5887
Spartanburg SC 29304
800-854-7597; 579-5479

★ Hoffco Inc
358 NW F St
Richmond IN 47374
317-966-8161

Holly Filter
31820 Via Ararat
Bonsall CA 92003
714-728-7095

Holsclaw Brothers Inc
1325 E Virginia St
Evansville IN 47711
812-423-7721

Homelite Div Textron Inc
14401 Carowinds Blvd
Charlotte NC 28217
704-588-3200

Hopkins Agricultural Chemical Co
PO Box 7532
Madison WI 53707
608-222-0624

Hotsy Corp
21 Inverness Way E
Englewood CO 80112
303-770-5200

Howard Rotavator Co
102 Howard Ave
PO Box 7
Muscoda WI 53573
608-739-3106

H D Hudson Mfg Co Professional Prods Div
2500 N Church St
Rockford IL 61103
815-968-2112

Hydroflo Corp
Easton Rd Rt 611 N
Plumsteadville PA 18949
215-249-9090

Hydro Rain
27671 La Paz Rd
Laguna Niguel CA 92667
714-831-6000

Hydro Terra Corp
800 N Park Ave
Pomona CA 91768
714-623-3211

Insect-O-Cutor Inc
1531 Stone Ridge Dr
Stone Mountain GA 30083
404-939-2835

Interlocking Paver Mfg Assoc
Five Bond St
Great Neck NY 11021
516-482-4665

Intermatic Inc
Intermatic Plaza
Spring Grove IL 60081
815-675-2321

International Harvester Co
401 N Michigan Ave
Chicago IL 60611
312-836-2000

International Reforestation Suppliers Inc
2100 W Broadway
PO Box 5547
Eugene OR 97405
503-345-0597

Irri-Trol Mfg Co
27940 Beale Ct
Valencia CA 91355
805-257-2333

Irrometer Co
PO Box 2424
Riverside CA 92516
714-689-1701

Jackson Mfg Co
PO Box 1649
Harrisburg PA 17105
717-234-6291

★Jacobsen Div Textron Inc
1721 Packard Ave
Racine WI 53403
414-637-6711

Jaeco Pump Co
539 Ford St
West Conshohocken PA 19428
215-825-1540

Kawasaki Motors Corp Engine Div
650 Valley Park Dr
Shakopee MN 55379
612-445-6060

★Hypro Div Lear Siegler Inc
375 Fifth Ave NW
New Brighton MN 55112
612-633-9300

Industrial Leasing Corp
2300 SW Sixth Ave
Portland OR 97201
800-547-4905

Inject-O-Meter Mfg Co
820 Thornton
Clovis NM 88101
505-763-4461

Kay Park Rec Corp
Hwy 218 S WTT
Janesville IA 50647
319-987-2313; 800-553-2476

KD Manitou Inc
Waco TX 76705
800-433-3304; In TX 817-799-0232

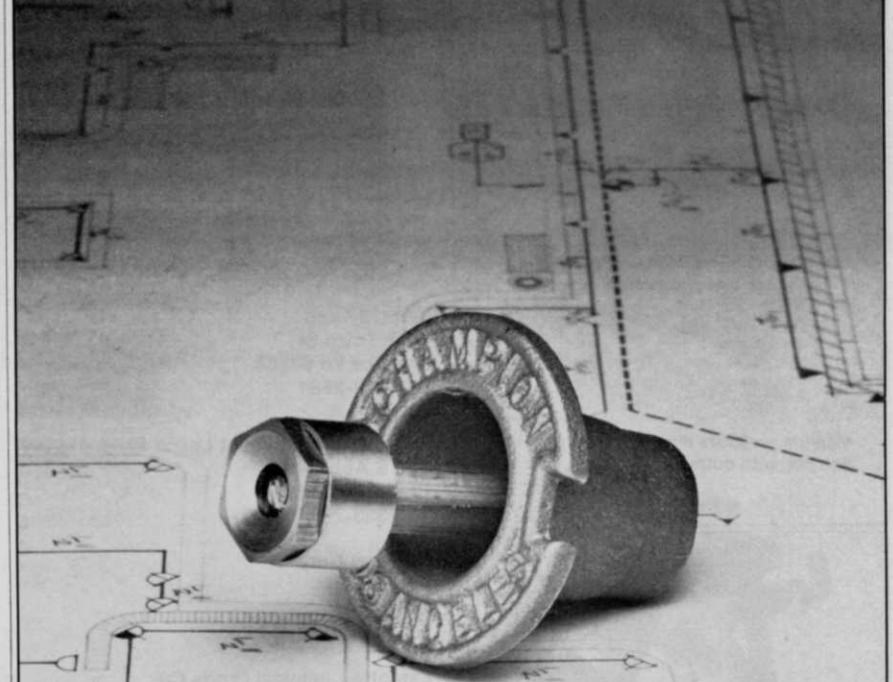
★F D Kees Mfg Co
700 Park
Beatrice NE 68310
402-223-2391

Kel Instruments Co
PO Box 1869
Clifton NJ 07015
201-471-3954

Kembro Inc
PO Box 305

Your blueprint to success for 45 years – Champion.

Since 1937, Champion sprinklers and accessories have made for efficient, economical irrigation systems.



Go with experience. Go with Champion.

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SPRINKLER EQUIPMENT

1460 N. Naud Street, Los Angeles, Calif. 90012-1982
In California, telephone: (213) 221-2108 or (213) 223-1545
Outside California, call toll-free: (800) 421-9051 or (800) 421-9054

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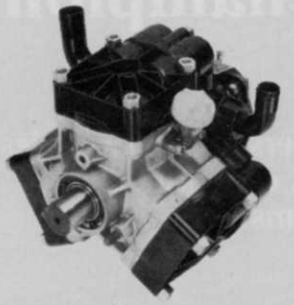
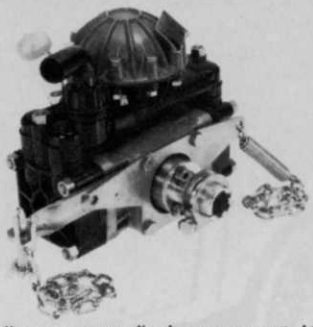
NEW! DIAPHRAGM PUMPS FROM HYPRO.

Announcing a complete line of low cost, low maintenance diaphragm pumps and accessories. These new pumps feature proven designs, high quality engineering and the reliability you expect from Hypro.

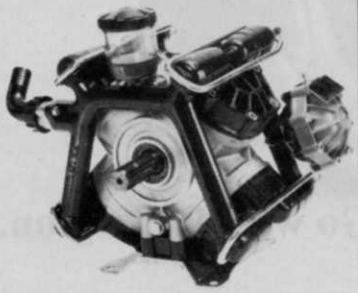
Outputs range from 5 to 60 gpm. Pressures from 250 to 850 psi. Pumps are extremely durable and easy to repair. Diaphragm pump applications range from spraying to pressure washing to liquid transfer to hydrostatic testing. And a full range of accessories plus nationwide Hypro service is available. Get the facts on new diaphragm pumps from Hypro today.



Low pressure diaphragm pumps, to 280 psi, with outputs to 60 gpm.



Medium pressure diaphragm pumps, to 580 psi, with outputs to 13 gpm.



High pressure diaphragm pumps, to 850 psi, with outputs to 50 gpm.

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A DIVISION OF LEAR SIEGLER INC
347 Fifth Ave NW, St. Paul, MN 55112 • (612) 633-9300

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continued

Mequon WI 53092
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Kenyon Mfg Inc
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Orange CA 92667
714-634-3422

Kershaw Mfg Co
Box 9328
Montgomery AL 36108

Kin Co Mfg
170 N Pascal
St Paul MN 55104
612-644-4666

King Brothers Industries
27114 Henry Mayo Dr
Valencia CA 91355
805-257-3262

Kohler Co Engine Div
Kohler WI 53044
414-457-4441

Koppers Co
1900 Koppers Bldg
Pittsburgh PA 15219
412-227-2000

★Kubota Tractor Corp
550 W Artesia Blvd
Compton CA 90220
213-537-2531

★Kut-Kwick Corp
1927-29 Newcastle St
Brunswick GA 31521
912-265-1630

La Font Corp
1319 Town St
Prentice WI 54556
715-428-2881

★Lakeshore Equipment Lesco Products Div
300 S Abbe Rd
Elyria OH 44036
216-323-7544

Lambert Corp
PO Box 66
Dayton OH 45401
513-223-7295

LaMotte Chemical Prods Co
PO Box 329
Chestertown MD 21620
301-778-3100

Landscape Forms Inc
431 Lawndale
Kalamazoo MI 49001
616-381-0396

Landscape Structures Inc
300 Dawn Heather Dr
Delano MN 55328
612-972-3391

Laval Corp, Claude (Lakos Separators)
1911 N Helm
Fresno CA 93727
209-255-1601

Lawn-Boy Product Group
McClure St
Galesburg IL 61401
309-343-0141

Lawnmaker Mfg Co
PO Box 671
Bay City MI 48707
517-894-4579

Lifetime Products
Rt 78 S
PO Box 465
Kewanee IL 61443
309-853-3387

Lighting Prods Div McGraw-Edison Co
400 Busse Rd
Elk Grove Village IL 60007
312-956-8400

Limb-Lopper Div/Robinson Ind
11845 Burke St
Santa Fe Springs CA 90670
213-945-1077

Lindig Mfg Corp
1875 W County Rd C
St Paul MN 55113
612-633-3072

Little Giant Products Inc
1600 NE Adams
Peoria IL 61601
309-673-9091

Little Giant Pump Co Sub Tecumseh Prods Co
3810 N Tulsa St
Oklahoma City OK 73112
405-947-2511

Locke Mfg Inc
One Boston Ave Industrial Pk
PO Box 980
Stratford CT 06497
203-333-3157

Long Mfg NC Inc
1907 N Main St
Tarboro NC 27886
919-823-4151

Lumenite Electronic Co
2331 N 17 Ave
Franklin Park IL 60131
312-455-1450

Magline Inc
503 S Mercer St
Pinconning MI 48650
517-879-2411

Mangelsdorf Seed Co
4500 Swan Ave
St Louis MO 63110
312-535-6700

Marco Sprayers
210 S Main
Newkirk OK 74647
405-362-3162

Tough mowers... from rough cut to smooth finish.

Built for the commercial user, to assure lowest operational cost through efficient design, low fuel consumption, low maintenance, and long life. Built to take the hard usage of the commercial mower operator and the environment in which the commercial mower functions.

kut-kwick

Brunswick, Georgia 31520
Telephone 912/265-1630

Circle No. 124 on Reader Inquiry Card

Equipment Companies

continued

Maruyama Corp of America
2361 Vineyard
PO Box 669
Escondido CA 92025
714-745-0669

Massey-Ferguson
1901 Bell Ave
Des Moines IA 50315

Master Craft Industrial Equipment Corp
PO Box 106
Tifton GA 31794
912-386-0610

Master Mfg Co
119 Main St
PO Box 694
Sioux City IA 51102
712-258-0108

Master Sprayers Inc
10756 Vernon Ave
Ontario CA 91761
714-627-7466

★ Mathews Co
500 Industrial Ave
Crystal Lake IL 60014
815-459-2210

McDowell Mfg Co
Dubois PA 15801
814-371-6550

McGraw-Edison Co Lighting Prods Div
See Lighting Prods Div McGraw-Edison Co

McMillen Div
4419 Ardmore Ave
Ft Wayne IN 46809
800-348-0964
IN & CN 219-747-6195

Mechanical Transplanter Co
1150 S Central Ave
Box 1008B
Holland MI 49423
616-396-8738

Medallion Div Farmhand Inc
525 15th Ave S
Hopkins MN 55343
612-938-6906

Melex USA Inc
1200 Front St Ste 101
Raleigh NC 27609
919-828-7645

Melnor Industries
One Carol Place
Moonachie NJ 07074
201-641-5000

Meredith Seed Miser
Howe ID 83244
208-767-3411

Merit Industries Inc
PO Box 8075
Cranston RI 02920
401-942-6505

Micron Corp
1424 West Belt Dr N Ste 180
Houston TX 77043
713-932-1405

Milwaukee Electric Tool Corp
13135 W Lisbon Rd
Brookfield WI 53005
414-781-3600

Minnesota Wanner Co
5145 Eden Ave S
Minneapolis MN 55436
612-929-1070

Miracle Recreation Equipment Co
PO Box 275
Grinnell IA 50112
515-236-7536

Mitsubishi AG Machinery Co Ltd
C/O Sumitomo Corp of America
345 Park Ave
New York NY 10154
212-935-8824

Mitts & Merrill Inc
109 McCoskry St
Saginaw MI 48601

Mobile Aerial Towers Inc
2314 Bowser Ave
Fort Wayne IN 46859
219-744-6181

Morbark Industries Inc
PO Box 1000
Winn MI 48896
517-866-2381

MoTrim Inc
240 Steubenville Ave
Cambridge OH 43725
614-439-2725

★ Mott Corp
500 Shawmut Ave
LaGrange IL 60525
312-354-7220

MTD Products Inc
Box 36900
Cleveland OH 44136
216-225-2600

Mud Cat National Car Rental System
PO Box 16247
St Louis Park MN 55416
800-328-7333

Musco Sports-Lighting Inc
PO Box 14
Muscatine IA 52761
319-263-2281

F E Myers Co
400 Orange St
Ashland OH 44805
419-289-1144

National Hydro-Ax Inc
PO Box 568
Owatonna MN 55060
507-451-8654

National Irrigation Specialists
1025 E Katella Unit F
Anaheim CA 92805
714-634-3336

★ National Mower Co
700 Raymond Ave
St Paul MN 55114
612-646-4079

L R Nelson Corp
7719 N Pioneer Ln
Peoria IL 61615
309-692-2200

Nevr-Rust Tool-Tainer Inc
PO Box 3499
Hialeah FL 33013
800-351-1363
In TX 915-643-2518

Nordco Electric Vehicles
26701 Redlands Blvd
Redlands CA 92373

Northeast Industries Inc
301 Greenwood Ave
Midland Park NJ 07432
201-652-6202

Norton Co Safety Prods Div
2000 Plainfield Pike
Cranston RI 02920
401-943-4400

Nunes Mfg
PO Box 5137
Modesto CA 95352
209-576-1000

★ Olathe Mfg Inc
100 Industrial Pkwy
Industrial Airport KS 66031
913-782-4396

Opdykes Truck Sales
Rt 309
Colmar PA 18915
215-822-8300

Orbex Inc
620 S Eighth St
Minneapolis MN 55404
612-333-1208

Otterbine Barebo Inc
RD 1
PO Box 217
Emmaus PA 18049
215-965-6018

Par Aide Products
296 N Pascal St
St Paul MN 55104

Parco Div Blue Mountain Prod Inc
PO Box 250
New Hartford NY 13413
315-737-5736

Parker Greenhouses Int'l
1325 Terrill Rd
Scotch Plains NJ 07076

Parker Sweeper Co
PO Box 1728
Springfield OH 45501
513-323-4901

Patrician Prods Inc
468 Union Ave
Westbury NY 11590
516-333-3910

Peerless Pump
1200 Sycamore St
Montebello CA 90640
213-726-1232

Pitman Div
Third & Duck Rd
PO Box 120
Grandview MO 64030
816-763-6000

Playtime Equipment Corp
Box J
Mars PA 16046
412-625-1541

Playworld Systems
315 Cherry St
New Berlin PA 17855
717-966-1015

Poligon Div W H Porter Inc
PO Box 1112-B
Holland MI 49423
616-399-1963

Poulan/Weed Eater
5020 Flournoy-Lucas Rd
Shreveport LA 71109
318-687-0100

★ Power Lawnmower Parts Inc
1920 Lyell Ave
PO Box 7837
Rochester NY 14606
716-458-0800

Power Spray Technology Inc
900 Calcon Hook Rd
Sharon Hill PA 19079
215-461-6330, 6331

Precision Products Inc
2415 S Grand Ave E
PO Box 2546
Springfield IL 62708
217-528-1311

Presto Products Inc
670 N Perkins St
PO Box 2399
Appleton WI 54913
414-739-9471

Howard Price Turf Equipment
18155 Edison
Chesterfield MO 63017
314-532-7000

Princeton Mfg Co
955 W Walnut St
PO Box 246
Canal Winchester OH 43110-0246
614-837-9096

Professional Turf Specialties
400 N Town Rd
Normal IL 61761
309-454-2469

Progressive Electronics Inc
432 S Extension
Mesa AZ 85202
602-834-4308

Promark Products Inc
712 E Edna Pl
Covina CA 91723
213-332-9388

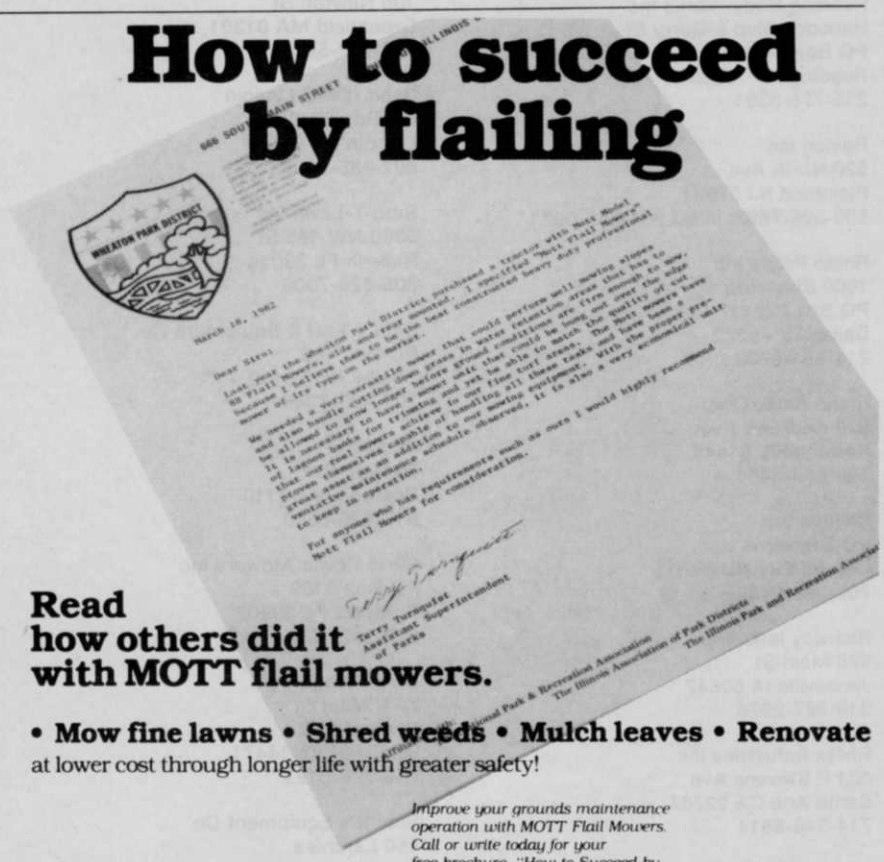
Rain Bird Sprinkler Mfg Corp
7045 N Grand Ave
Glendora CA 91740

Raindrip Inc
14675 Titus St
Panorama City CA 91402
213-988-0303

Rain-O-Mat Sprinklers Inc
12414 E Whittier Blvd
PO Box 151
Whittier CA 90608-0151
213-693-2721

★ Ransomes Inc
One Bob-Cat Ln
Johnson Creek WI 53038
414-699-2000

How to succeed by flailing



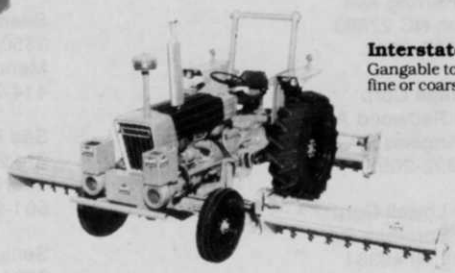
Read how others did it with MOTT flail mowers.

• Mow fine lawns • Shred weeds • Mulch leaves • Renovate
at lower cost through longer life with greater safety!

Improve your grounds maintenance operation with MOTT Flail Mowers. Call or write today for your free brochure, "How to Succeed by Flailing."

Heavy Duty
48", 60", 72"
fine cut only, reversible

Super Heavy Duty
48", 60", 74", 88"
fine or coarse cut for higher h.p. tractors.



Interstater®
Gangable to 21'
fine or coarse cut

mott® HAMMER KNIFE®

the original safety flail mowing system

MOTT CORPORATION
589 Shawmut Avenue • P.O. Box 518 • LaGrange, Illinois 60525
(312) 354-7220

Circle No. 132 on Reader Inquiry Card

Equipment Companies

continued

Raverty's Sod Blades
PO Box 7606
St Paul MN 55119
612-774-2155

Reach-All Mfg
436 Calvary Rd
Duluth MN 55803
218-728-5138

Reading Body Works Inc
Hancock Blvd & Gerry St
PO Box 14
Reading PA 19603
215-775-3301

Reinco Inc
520 North Ave
Plainfield NJ 07061
800-526-7687; In NJ 201-755-0921

Rhino Prods Inc
1000 Singleton
PO Box 222117
Dallas TX 75222
214-651-0733

Rhino Sales Corp
620 Andrews Ave
Kewanee IL 61443
309-853-4461

Richdel Inc
PO Drawer A
Carson City NV 89701
702-882-6786

Richway Industries
525 Main St
Janesville IA 50647
319-987-2976

Rivlex Industries Inc
301 E Stevens Ave
Santa Ana CA 92707
714-540-8814

Robark Inc
7309 Lake Dr
Lino Lakes MN 55014
612-784-0657

Rokor Inc
310 Herring Ave
Wilson NC 27893
919-237-2108

Rolatape Corp
4221 Redwood Ave
Los Angeles CA 90066
213-822-2057

Root-Lowell Corp
1000 Foreman Rd
Lowell MI 49331
616-897-9212

Roseman Mower Corp
2300 Chestnut Ave
Glenview IL 60025
312-729-2300

Rotocast Plastic Products Inc
3645 NW 67 St
Miami FL 33147
305-693-4680

Royal Coach/Buckner
4381 N Brawley Ave
Fresno CA 93711
209-275-0500

Royer Foundry & Machine Co
PO Box 1232
Kingston PA 18704
717-287-9624

Rugg Mfg Co
105 Newton St
Greenfield MA 01301
413-773-5471

★ Ryan /OMC Lincoln
PO Box 82409
Lincoln NE 68501
402-435-7208

Safe-T-Lawn Inc
5350 NW 165 St
Hialeah FL 33014
305-625-7000

Safety Test & Equipment Co
PO Box 400
Shelby NC 28150
704-482-7346

Samson
99 High St
Boston MA 02110
617-426-6550

Sarlo Power Mowers Inc
PO Box 1169
Ft Myers FL 33902
813-332-1955

Don Savage Co
39 E Main St
PO Box 375
Honeoye NY 14471
716-229-5121

Schutt's Equipment Co
450 Larchlea
Birmingham MI 48012
313-642-6555

★ O M Scott & Sons Co Proturf Div
Marysville OH 43040
513-644-0011

Seaman Co
13500 W Carmen Ave
Menomonee Falls WI 53051
414-781-8900

Sea Ranch
Rte 2 Box 604
Sheridan AR 72150
501-942-2515

Sensation Corp
3601 N 16th
Omaha NE 68110
402-345-3884

Seymour Mfg Co
500 N Broadway
Seymour IN 47274
812-522-2900

Shaver Mfg Co
PO Box 3087
Des Moines IA 50317
515-266-7550

Sidewinder Int'l Inc
PO Box 671
Bay City MI 48707
517-894-4570

Sioux Steam Cleaner Corp
Sioux Plaza
Beresford SD 57004
605-763-2776

P E Skaling Soilmoisture Equipment Corp
801 S Kellogg Ave
Goleta CA 93117
805-964-3525

Skil Corp
4801 W Peterson Ave
Chicago IL 60646
312-286-7330

Smithco Inc
11 West Ave
Wayne PA 19087
215-688-4009

Smith Precision Products
1299 Lawrence Dr
Newbury Park CA 91320
805-498-6616

Seymour Smith & Son Inc
900 Main St
Oakville CT 06779
203-274-2558

Snapper Power Equipment
535 Macon Rd
McDonough GA 30253
404-957-9141

Snowco
4350 McKinley St
PO Box 12067
Omaha NE 68112
402-453-2200

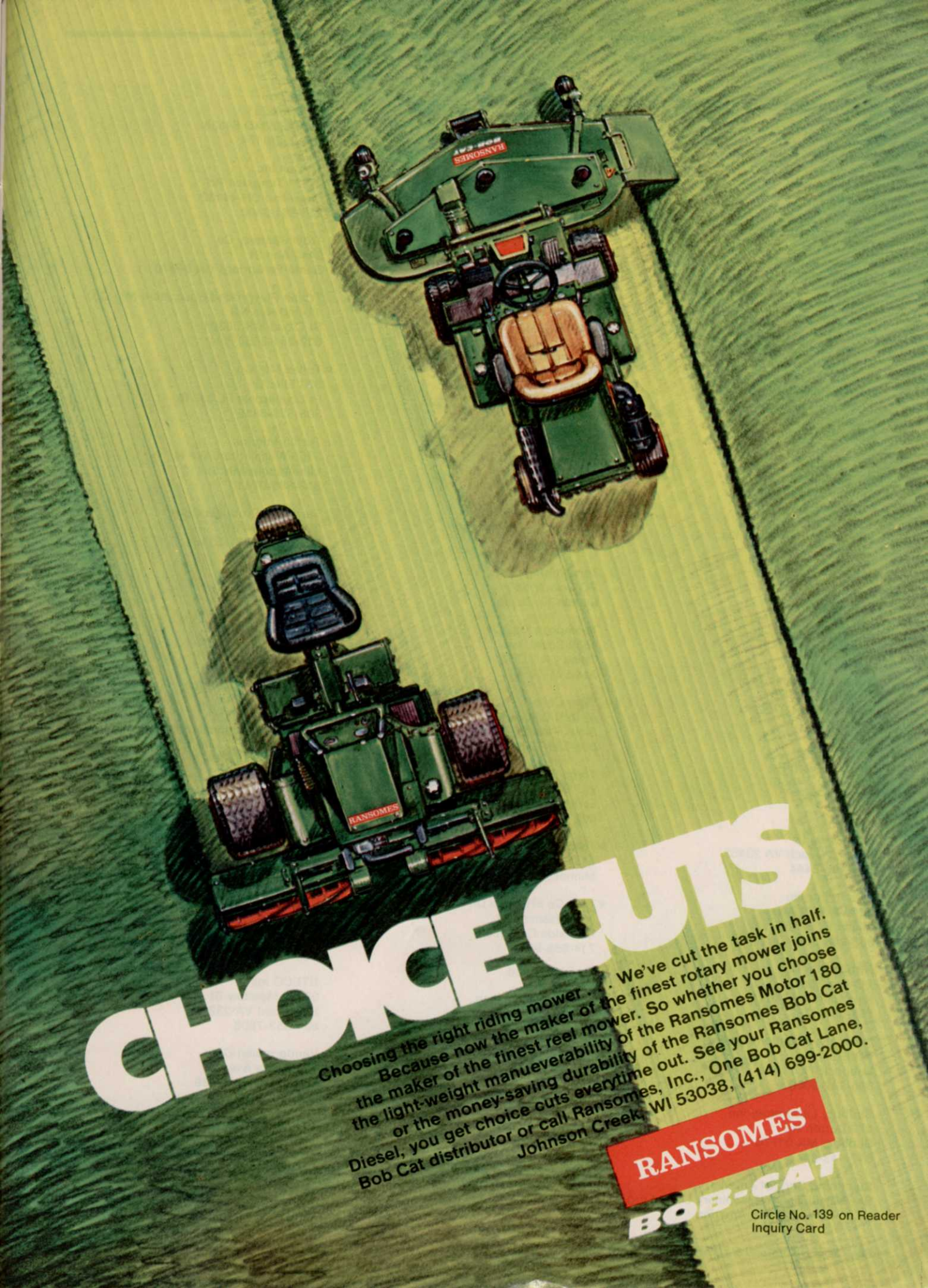
Soilmoisture Equipment Corp
See P E Skaling Soilmoisture Equipment Corp

Solarcell Land & Bldg Inc
412 113th St
Arlington TX 76011
817-640-1488

★ Solo Inc
5100 Chestnut Ave
PO Box 5030
Newport News VA 23605
804-245-4228

Sorensen Sprayers Inc
Airport Rd
Box 344
Worthington MN 56187
507-376-6230

Sperry New Holland
500 Diller Ave


RANSOMES
BOB-CAT
RANSOMES
CHOICE CUTS
Choosing the right riding mower . . . We've cut the task in half.
Because now the maker of the finest rotary mower joins
the maker of the finest reel mower. So whether you choose
the light-weight manueverability of the Ransomes Motor 180
or the money-saving durability of the Ransomes Bob Cat
Diesel, you get choice cuts everytime out. See your Ransomes
Bob Cat distributor or call Ransomes, Inc., One Bob Cat Lane,
Johnson Creek, WI 53038, (414) 699-2000.
RANSOMES
BOB-CAT

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Equipment Companies

continued

New Holland PA 17557
717-354-1121

★Spraying Systems Co
North Ave at Schmale Rd
Wheaton IL 60187
312-665-5000

Spring City Electric Mfg Co
Hall & Main Sts
PO Drawer A
Spring City PA 19475
215-948-4000

Spyder Sales Inc
12838 Westheimer
Houston TX 77077
800-435-6108

A G Stafford
PO Box 8877
Canton OH 44711
216-458-2855

Sta-Green Plant Food Co
PO Box 540
Sylacauga AL 35150
205-245-5282

Standard Golf Co
220 E Fourth St
Cedar Falls IA 50613
319-266-2638

Stanley Hydraulic Tools
3810 SE Naef Rd
Milwaukie OR 97222
503-659-5660

Steiner Corp
12657 Church Rd
Orrville OH 44667
216-683-0055

Stihl Inc
536 Viking Dr
Virginia Beach VA 23452
804-486-8444

Strong Ent Inc
4240 SW 72 Ave
Miami FL 33155
305-264-5525

Strong Mfg Co
PO Box 8068
Pine Bluff AR 71611
501-535-4753

Submatic Irrigation Systems
PO Box 246
Lubbock TX 79408
806-747-9000

Sudbury Laboratory Inc
572 Dutton Rd
Sudbury MA 01776
617-443-8844

Sumitomo Corp of America
See Mitsubishi Ag Machinery Co Ltd c/o Sumitomo Corp of America

Swan Hose Div Amerace Corp
See Anchor/Swan Corp

Sweepster
2810 SW Baker Rd
Dexter MI 48130
313-426-3961

Swenson Spreader Co
127 Walnut St
Lindenwood IL 61049
815-393-4455

Taylor-Dunn Mfg Co
2114 W Ball Rd
Anaheim CA 92804
714-956-4040

Tecumseh Products Co Engine Div
900 North St
Grafton WI 53024
414-377-2700

Teledyne Wisconsin Motor
1910 S 53 St
Milwaukee WI 53219
414-384-5800

Tennant Co
701 N Lilac Dr
Minneapolis MN 55440
612-540-1200

Terrain King Corp
PO Drawer 549
Sequin TX 78155

Thompson Mfg Co
4832 Chino Ave
Chino CA 91710
714-591-4851

Tiger Corp
4315 N Cliff Ave
Sioux Falls SD 57104
605-336-7900

Torco Equipment Co
207 Eiler Ave
Louisville KY 40214
502-366-1415

★Toro Co Commercial Prods
8111 Lyndale Ave S
Minneapolis MN 55420

★Toro Co Irrigation Div
5825 Jasmine St
Riverside CA 92502
714-688-9221

Trac N Combo
PO Box 7
Metuchen NJ 08840

Tradewinds Inc
PO Box 1191
Tacoma WA 98401
206-272-4887

Trans-Tree Corp
5100 Eden Ave
Edina MN 55436
612-927-4450

Travelrain Power Sprinkler Co
239 N Robertson Blvd
Beverly Hills CA 90211
213-276-3213

Trees Inc
Rt 5 Box 251
Carthage MO 64836
417-358-8174

Tri-Con Inc
27331 Tungsten Rd
Cleveland OH 44132
216-261-3400

Trojan Battery Co
9440 Ann St
Santa Fe Springs CA 90670

Trojan Playground Equipment Mfg Co
11-2nd Ave NE
St Cloud MN 56301
612-251-3080

★Tuflex Mfg Co
800 Eller Dr
Ft Lauderdale FL 33316
305-525-8815

Turfco Mfg Inc
3456 Washington Ave N
Minneapolis MN 55412
612-588-0741

Turfgrass Products Corp
2210 NE 124 St
North Miami FL 33181
305-893-6449

Turfibre Products
2210 NE 124 St
North Miami FL 33181
305-893-6449

Turf Vac Corp
PO Box 4339
Long Beach CA 90804
213-426-9376

Turner International (Eng) Ltd
6480 Chupp Rd Unit B1
Conyers GA 30058
404-482-7661

Union Fork & Hoe Co
500 Dublin Ave
Columbus OH 43216
614-228-1791

Universal-Gerwin Div Leigh Products Inc
460 Main St
Saranac MI 48881
616-642-9413

Universal Tractor-Equipment Corp
See UTECO Inc

UTECO Inc
923 N Meadow St
Richmond VA 23220
804-353-7806

Vandermolen Corp
119 Dorsa Ave
Livingston NJ 07039
201-992-8506

Vaughan's Seed Co
5300 Katrine Ave
Downers Grove IL 60515
312-969-6300

Vemco Corp of America
1331 23rd St

WE GIVE GREENS THE KINDEST CUT OF ALL.

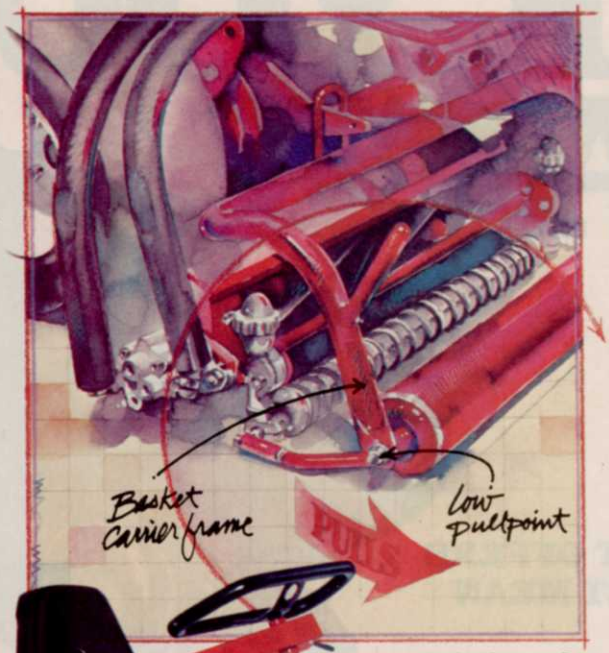
WITH REELS THAT FLOAT.

Toro pulls out the stops to give you the kind of greensmower you want most.

One that keeps you cutting. With a quality of cut second to none.

That's why our Greensmaster 3® is the choice of the majority of America's top hundred golf courses.

This fast, agile professional gives each green a uniform cutting height, appearance and playing characteristic.



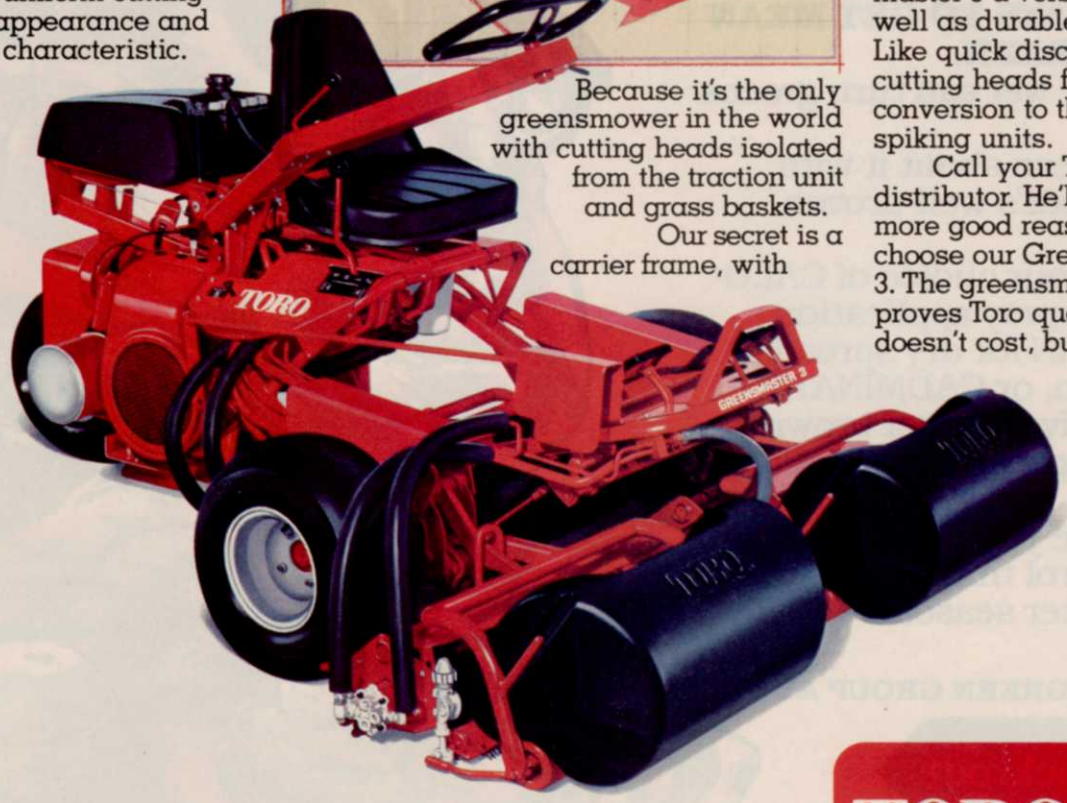
Because it's the only greensmower in the world with cutting heads isolated from the traction unit and grass baskets.

Our secret is a carrier frame, with low pullpoints, that pulls rather than pushes. Resulting in balanced, fully floating cutting heads that allow the reels to float freely as they cut, unaffected by dips or bumps encountered by other parts of the machine. Or by the weight of clippings in the baskets.

You get the kindest cut of all. Smooth. Even. Consistently superb.

Plus, other features that make the Greensmaster 3 a versatile as well as durable performer. Like quick disconnect cutting heads for easy conversion to thatching or spiking units.

Call your Toro distributor. He'll give you more good reasons to choose our Greensmaster 3. The greensmower that proves Toro quality doesn't cost, but pays.

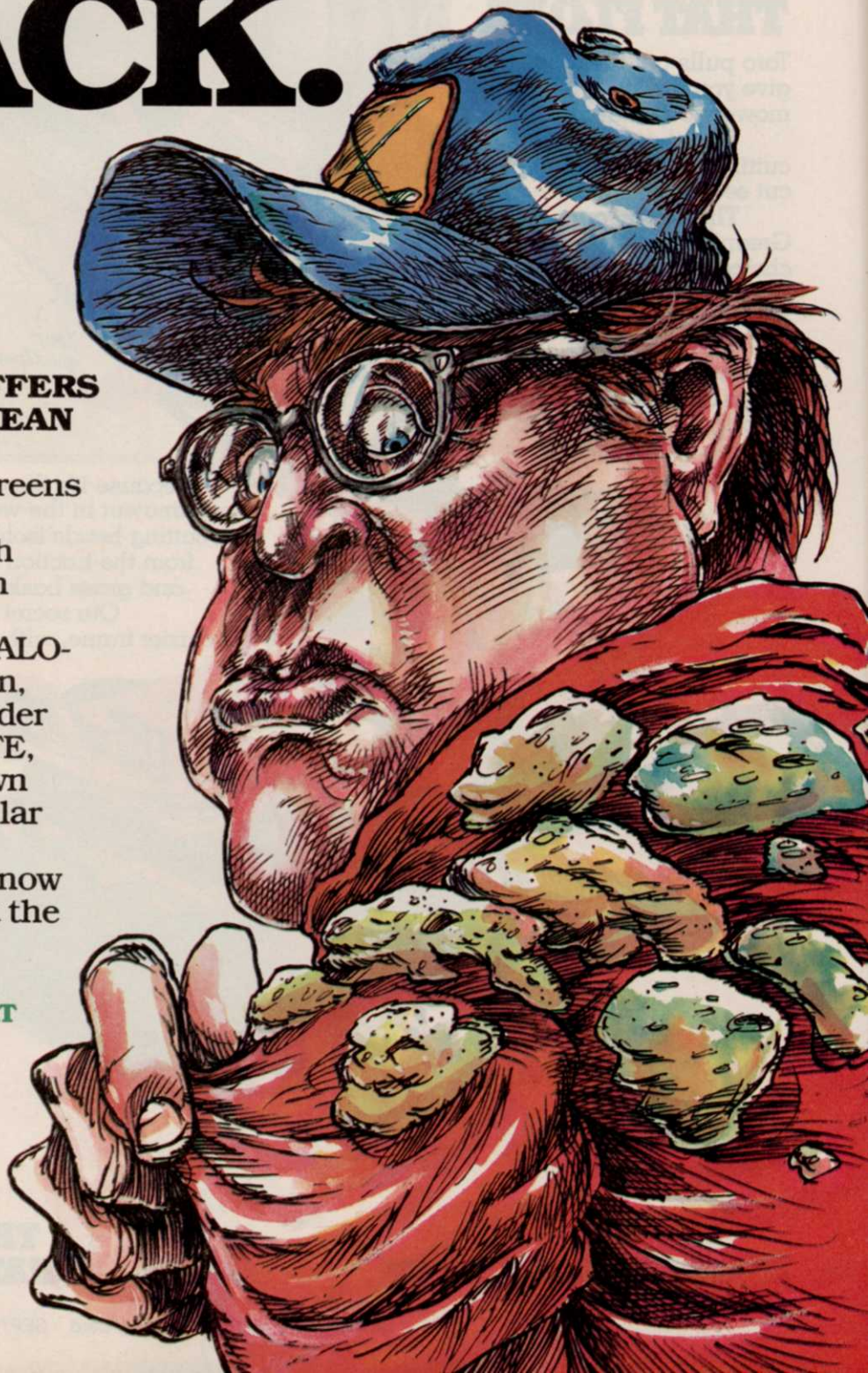


TORO®

THE PROFESSIONALS THAT KEEP YOU CUTTING.

"Toro" is a registered trademark of The Toro Company
8111 Lyndale Ave. So., Minneapolis, Minnesota 55420.

GET SNOW MOLD OFF YOUR BACK.



MALLINCKRODT OFFERS THREE WAYS TO GET MEAN ABOUT GREEN.

Winter wet can turn greens splotchy.

Get mean about it with Mallinckrodt's well-proven controls.

Take your choice of CALO-CLOR for spray application, CALO-GRAN for dry spreader application, or CADMINATE, also effective against brown patch, copper spot and dollar spot.

All give you positive snow mold control that can last the whole winter season.

FROM THE GREEN GROUP AT

Mallinckrodt®

MALLINCKRODT, INC.
ST. LOUIS
JERSEY CITY
LOS ANGELES

Circle No. 127 on Reader Inquiry Card

Equipment Companies

continued

Racine WI 53403
414-634-6050

★Vermeer Mfg Co
New Sharon Rd
Box 200
Pella IA 50219
515-628-3141

Vicon Farm Machinery Inc
3741 Cook Blvd
PO Box 6313
Portsmouth VA 23323
804-485-1600

Jim Walls Co
12820 Hillcrest Rd Ste 119
Dallas TX 75230
214-239-8577

Weather-matic
3301 W Kingsley Rd
Garland TX 75041
214-278-6131

Western Cascade Inc
1150 N Red Gum St
Anaheim CA 92803
714-630-4640

Western Products
7777 N 73 St
Box 23045
Milwaukee WI 53129
414-354-2310

Western Wood Structures Inc
8333 SW Cirrus Dr
Beaverton OR 97005
503-644-1721

Westheffer Co
1235 N Third
Lawrence KS 66044
913-843-1633

Westinghouse Electric Corp Lamp Div
Bloomfield NJ 07003

Wheel Horse Products Inc
515 W Ireland Rd
PO Box 2649
South Bend IN 46680
219-291-3112

Wheel Spray Corp
Box 97
Delafield WI 53018
414-646-8640

D J Wilson Co
2707 Churchill Dr
Huntsville AL 35801
205-881-6391

Hermann A Wirth
PO Box 4305
Princeton FL 33032

Wood/Chuck Chipper Corp
PO Drawer 400
Shelby NC 28150
704-482-4356

★Woods Div Hesston Corp
Hwy 2 South
Oregon IL 61108
815-732-2141

Woodstream Corp
Front & Locust Sts
Lititz PA 17543
717-626-2125

W-W Grinder Inc
2957 N Market
Box 4029
Wichita KS 67204
316-838-4229

Yamaha Motor Corp US
PO Box 6620
Buena Park CA 90622

Yanmar Tractor (USA) Inc
476 Country Club Dr
Bensenville IL 60106
312-860-5370

Yard Vac Prods Inc
2889 N Larrin
Fresno CA 93727
209-291-6691

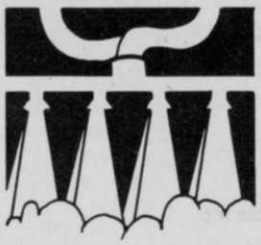
Yazoo Mfg Co
3607 Livingston Rd
Jackson MS 39216
601-366-6421

York Rakes Div York Modern Corp
PO Box 488
Unadilla NY 13849
607-369-2631

Young Industries
1033 Wright Ave
Mountain View CA 94043
415-968-8486

Keep this buyer's guide for fall and winter planning.

Tell manufacturers you saw their listing in WT&T.



3. Chemicals

This section is broken down by chemical product with companies providing that chemical listed below. Companies' common and brand names are listed on the line following the company name.

Adjuvant/Carrier

Aquatrols Corp
BASF Wyandotte Corp
Citowett Plus
Bonide Chemical Co
Chevron Chemical Co
Drexel Chemical Co
Surf-Ac 820
Grass Growers Inc
Herbex
Hopkins Agricultural Chemical Co
Kalo Agricultural Chemicals
B10-88
Nalco Chemical Co
PBI-Gordon Corp
Adjumec
Rohm & Haas Co
Triton
Stull Chemical Co
Bivert
T H Agricultural & Nutrition Co
Super Savol Concentrate

Algaecide

Applied Biochemists Inc
Citrine-Plus
Aquashade Inc
Aquashade
Clean-Flo Laboratories Inc
Buffered Alum, Clean-Flo Lake Cleanser
Faesy & Besthoff Inc
Copper Sulphate
Great Lakes Biochemical Co
Algimycin
Lakeshore Equipment Lesco Products Div
Copper Sulphate, Lesocide-Plus
Rohm & Haas Co
Hyamine

Antitranspirant

Agro Chem Inc
Bonide Chemical Co
W A Cleary Chemical Corp
Clear Spray
C B Dolge
Encap Products Co
Wilt-Pruf

CHEMICALS

continued

PBI-Gordon Corp
Exhault 4-10
Wilt-Pruf Products Inc
Wilt-Pruf

Colorant

Agro Chem Inc
W A Cleary Chemical Corp
Turf Colorant, Greenzit
Lakeshore Equipment Lesco Products Div
Turf Colorant, Lesco Green
Mallinckrodt Inc
Turf Colorant, Auragreen, Vitalon

Compatibility Agent

Hopkins Agricultural Chemical Co
Unite
Kalo Agricultural Chemicals
Compex
Miller Chemical & Fertilizer Corp
Sandoz Inc
Stull Chemical Co
Bivert

Defoamer

Agro Chem Inc
Ashland Chemical Co
W A Cleary Chemical Corp
Cleary Defoamer
Drexel Chemical Co
Wetz
Faesy & Besthoff Inc
Defoamer & Unfoamer
Hopkins Agricultural Chemical Co
Kalo Agricultural Chemicals
Lakeshore Equipment Lesco Products Div
Lesco Defoamer
Miller Chemical & Fertilizer Corp
Montco Products Corp
Zap!
Rigo Co
Rigo D-Fome
Stull Chemical Co
Bivert

Drift Retardent

Agro Chem Inc
W A Cleary Chemical Corp
Drift Proof
Stull Chemical Co
Bivert

Fertilizer, Tree

Adco Works
Eeesy Grow
Agro Chem Inc
BFC Chemicals Inc
Nitroform, Powder Blue
C-I-L Inc
Sulfur Coated Urea
Creative Sales Inc
Medicap 2N, Medicap FE, Medicap MN, Medicap MO
Davey Tree Expert Co
Davey Arbor-Green
Estech Inc (IL)
Gro-Tone
Faesy & Besthoff Inc
Great Salt Lake Minerals & Chemicals Corp
GSL Sulfate of Potash
International Spike
Lakeshore Equipment Lesco Products Div
Lesco Tree & Shrub
Lebanon Chemical Corp
Lebanon Tree Food
Leffingwell Chemical Co
Nutra Phos, Sorba Spray, Vitatone
J J Mauget Co
Milwaukee Metropolitan Sewage District
Milorganite
Plant Marvel Laboratories Inc
Plant Marvel
Rigo Corp
Nutri-Pak
Sierra Chemical Co
USS Agri-Chemicals Div US Steel
USS Vertagreen

Fertilizer, Turf

Agro Chem Inc
Allied Chemical
The Andersons
Tee Time
BFC Chemicals Inc
Blue Chip, Nitroform
Bonide Chemical Co
Chevron Chemical Co
C-I-L Inc
Sulfur Coated Urea
W A Cleary Chemical Corp
Fluf, 10-1-4 Liquid
Estech Inc (FL)
Par Ex
Estech Inc (IL)
Gro-Tone
Faesy & Besthoff Inc
Grass Growers Inc
Terra Plus
Great Salt Lake Minerals & Chemicals Corp
GSL Sulfate of Potash
Jonathan Green & Sons Inc
Landscaper 600
Lakeshore Equipment Lesco Products Div
Lesco Turf Fertilizer
Lebanon Chemical Corp
Lebanon Country Club
Leffingwell Chemical Co
Nutra Phos, Sorba Spray, Vitatone
Liqui*Lawn Corp
Liqui*Lawn Spray'On Lawn Food
Loft-Kellogg Seed Inc
Miller Chemical & Fertilizer Corp
Milwaukee Metropolitan Sewarage District
Milorganite
Pennwalt Corp
Plant Marvel Laboratories Inc
Plant Marvel
Rigo Corp
Plant Food w/Systemic Insecticide
O M Scott & Sons Co Proturf
Sierra Chemical Co
Sta-Green Plant Food Co
Sta-Green
Stanford Seed Co
Old English
Sudbury Laboratory Inc
USS Agri-Chemicals Div US Steel
USS Vertagreen
Vaughan's Seed Co

Fungicide, Tree

Agro Chem Inc
Bonide Chemical Co
Chevron Chemical Co
Orthocide 50 Wettable
Diamond Shamrock Corp
Daconil 2787 Flowable, Daconil 2787 W-75
Drexel Chemical Co
Maneb 80
E I du Pont de Nemours & Co
Estech Inc (IL)
Vigoro
Faesy & Besthoff Inc
Lakeshore Equipment Lesco Products Div
Lesco 4
Mallinckrodt Inc
Zyban
J J Mauget Co
Mobay Chemical Corp Agri Chem Div
MSD/AGVET Div Merck & Co
Arbotect 20 S
PBI-Gordon Corp
Rohm & Haas Co
Dikar
T H Agriculture & Nutrition Co
Du-Ter, Nutra-Spray Copper
Vineland Chemical Co

Fungicide, Turf

Agro Chem Inc
The Andersons
Tee Time
Bonide Chemical Co
Ciba-Geigy Corp
Subdue
W A Cleary Chemical Corp
Bromosan
Diamond Shamrock Corp
Daconil 2787 Flowable, Daconil 2787 W-75
C B Dolge
E I du Pont de Nemours & Co
Tersan
Estech Inc (IL)
Vigoro
Faesy & Besthoff Inc
Lakeshore Equipment Lesco Products Div
Lesco Thiram
Lebanon Chemical Corp
Lebanon Turf Fungicide
Mallinckrodt Inc
Calo-Clor, Calo Gran, Duosan, Fungo 50, Koban 30, Koban 1.3G, Kromad, Thiramad, Cadimate
Mobay Chemical Corp Agri Chem Div
Bayleton
MSD/AGVET Div Merck & Co
Mertect 340 F
Olin Corp
Terraclor, Terrazole 35W
PBI Gordon Corp
Carbamec, Dymec, Formec
Rhone-Poulenc Chemical Co Agro Chem Div
Chipco 26019
Rigo Co
Benomyl Systemic Fungicide
Rohm & Haas Co
Fore
O M Scott & Sons Proturf
Tuco Ag Chemicals
Acti Dione, Banol

Growth Regulator

Drexel Chemical Co
Retard
Estech Inc (IL)
Vigoro
Maag Agrochemicals Hoffmann-LaRoche
Atrinal
3M/Agricultural Products
Embark
MSD/AGVET Div Merck & Co
Gibrel
Nalco Chemical Co
Pennwalt Corp
US Borax, Maintain

Herbicides, Aquatic

Agro Chem Inc
Applied Biochemists Inc
Aquashade Inc
Aquashade
Chevron Chemical Co
Ortho Diquat Water Weed Killer
Ciba-Geigy Corp
Simazine, Aquazine
Clean-Flo Laboratories Inc
Buffered Alum, Clean-Flo Lake Cleanser
Pennwalt Corp
T H Agriculture & Nutrition Co
Casoron G-10
Union Carbide Ag Prod Co

Herbicides, Nonselective

Chevron Chemical Co
Paraquat, Chevron
Ciba-Geigy Corp
Prometon, Pramitol
Crystal Chemical Co
Drexel Chemical Co
Methyl Bromide & Chloropicrin, Plant Bed Gas, Simazine, Atrazine, Diuron
E I du Pont de Nemours & Co
Elanco Products Co
Spike
Estech Inc (IL)
Vigoro, Weed & Grass Killer,
Faesy & Besthoff Inc
Eptam
Hopkins Agricultural Chemical Co
Revenge, Rout & Dozer, Urox
Lakeshore Equipment Lesco Products Div
Lesco Bor
Monsanto Co
Glyphosate, Roundup
Occidental Chemical Co
Monobor Chlorate, Ureabor
Rigo Co
Amitrol-T Liquid
Shell Chemical Co
Atrazine, Shell Atrazine 80W
Stauffer Chemical Co
Vapam
T H Agriculture & Nutrition Co
Dichlobenil, Casoron G-4 & W-50
2, 4-DB, Klean-Up
NPA-Dinitro, Klean-Krop

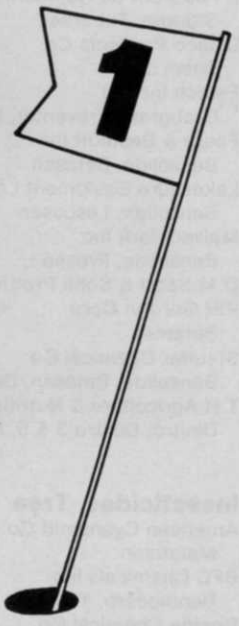
Herbicides, Postmergence Selective

BASF Wyandotte Corp
Beritazon, Basagran
BFC Chemicals Inc
Ethofumesate, Prograss
W A Cleary Chemical Corp
MCPP, MCPP + 2, Methor 30, 4D
Diamond Shamrock Corp
MSMA, Bueno 6, Daconate 6, LoVol/2,4-D + 2,4-DP, D Plus DP, MCPP, MCPP-D-4, MCPP-K-4, MCPP + 2,4-D Amine, 2 Plus 2, 2,4-D Amine, Amine 4D, Dacamine 360D
Dow Chemical USA
2, 4-D, DMA-4, Esteron 99 Concentrate, Formula 40, Phenoxy
Drexel Chemical Co
DSMA, EPTC, MSMA, Ansar
Estech Inc (IL)
Vigoro
Kalo Agricultural Chemicals
Demise
Lakeshore Equipment Lesco Products Div
2,4-D Dicamba, Lesco 8-1
Lebanon Chemical Corp
Liqui*Lawn Corp
Weed Control, Spray'On Broadleaf
Mallinckrodt Inc
Dicamba, Trexsan
Mobay Chemical Corp Agri Chem Div
Sencor

A NEW LOOK

Milorganite®

And a Safer Fertilizer



"The Golf Course Choice"

Milorganite... The Natural Organic Fertilizer

For over 55 years, America's leading turfgrass managers have profited from the use of Milorganite, and now **Milorganite is better than ever.**

Wrapped Pallets Available Next Spring

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
735 North Water St. Milwaukee, WI 53202

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CHEMICALS

continued

PBI Gordon Corp
2,4-D, MCPP & Dicamba, Trimec
Rigo Co
Super D Weedone, Triple Action Weed Killer
Rohm & Haas Co
Blazer, Stam, Stapede
O M Scott & Sons Proturf
Sta-Green Plant Food Co
Sta-Green
Stanford Seed Co
Old English
T H Agriculture & Nutrition Co
2, 4-D, Ded-Weed Sulv-Amine, NPA-Dinitro, Klean-Krop, Napthlam, NPA-3, Dinitro, Klean-Up
USS Agri-Chemicals Div US Steel
USS
Velsicol Chemical Corp
Dicamba, Banor 4S, Banor +24D

Herbicides, Preemergence

The Andersons
Tee Time (fertilizer plus herbicide)
BFC Chemicals Inc
Ethofumesate, Prograss
Diamond Shamrock Corp
DCPA, Dactha G-5, Dacthal W-75
E I du Pont de Nemours & Co
Siduron, Tupersan
Elanco Products Co
Balan
Estech Inc (IL)
Crabgrass Preventer, Vigoro
Faesy & Besthoff Inc
Bensulide, Betasan
Lakeshore Equipment Lesco Products Div
Bensulide, Lescosan
Mallinckrodt Inc
Bensulide, Presan
O M Scott & Sons Proturf
PBI Gordon Corp
Betamec
Stauffer Chemical Co
Bensulide, Betasan, Devrinol
T H Agriculture & Nutrition Co
Dinitro, Dinitro 3 & 5, Napthlam, NPA-3

Insecticides, Tree

American Cyanamid Co
Malathion
BFC Chemicals Inc
Bendiocarb, Turcam
Bonide Chemical Co
Chevron Chemical Co, Orthene Tree & Ornamental Spray
Ciba-Geigy Corp
Diazinon
Conrel
Creative Sales Inc
Acephate, Acecap
Dow Chemical USA
Chlorpyrifos, Dursban
Drexel Chemical Co
Methoxychlor, Carbaryl
E I du Pont de Nemours & Co
Faesy & Besthoff Inc
Diazinon
Lakeshore Equipment Lesco Products Div
Diazinon, Lesco Diazinon
Mallinckrodt Inc
Bendiocarb, Dycarb, Diazinon & Methoxyclor, Dymet
J J Mauget Co
Mobay Chemical Corp Agri Chem Div
Baytex, Dansit, Di-Syston, Dylox, Guthion, Metasystox-R, Systox
PBI-Gordon
Prentiss Drug & Chemical Co
Rhone-Poulenc Chemical Co Agro Chem Div
Rohm & Haas Co
Karathane, Kelthane
Shell Chemical Co
Fenbutatin-oxide, Vendex 50WP, 50WSB. Fenvalerate, Pydrin 2.4EC, Methomyl, Nudrin 1.8S, 90WSP, Monocrotophos, Azodrin 5WM
Stauffer Chemical Co
Phosmet, Imidan
T H Agriculture & Nutrition Co
Bacillus Thuringiensis, Bactur-L
T H Agriculture & Nutrition Co
Diazinon, Diazinon AG-4 Diflubenzuron, Dimilin W-25 Dimethoate, De-Fend E267, W-25, Malathion, Malathion E-5, E-8
Union Carbide Ag Prod Co
Sevin
Zoecon Corp Ag Chem Div

Insecticides, Turf

American Cyanamid Co
The Andersons
Tee Time (fertilizer plus insecticide)
BFC Chemicals Inc
Bendiocarb, Turcam
Bonide Chemical Co
Ciba-Geigy Corp
Diazinon, D-Z-N
Conrel
C B Dolge
Dow Chemical USA
Chlorpyrifos, Dursban
Drexel Chemical Co
Carbaryl, Carbaryl
E I du Pont de Nemours & Co
Estech Inc (IL)
Insect Control & Lawn Fertilizer, Vigoro
Faesy & Besthoff Inc
Dursban
Hooker Chemical
Hopkins Agricultural Chemical Co
Diazinon, Malathion
Lakeshore Equipment Lesco Products Div
Diazinon, Lesco Diazinon 5G
Lebanon Chemical Corp, Lebanon Insect Control
Mallinckrodt Inc
Diazinon & Methoxyclor, Dymet
Mobay Chemical Corp Agri Chem Div
Baygon, Dasanit, Dylox, Oftanol
PBI Gordon Corp
Liquid Sevin, Carbamec
Prentiss Drug & Chemical Co
Rigo Co
Ant Granules, Dursban Lawn & Ornamental Insect Spray
Rohm & Haas Co
Kelthane
O M Scott & Sons Co Proturf
Stauffer Chemical Co
ASP 51, Aspon
T H Agriculture & Nutrition Co
Diflubenzuron, Dimilin
Tuco Ag Chemicals
Trichlorfon, Proxol
Union Carbide Ag Prod Co
Carbaryl, Sevin
USS Agri-Chemicals Div US Steel
USS

Miticides

Mobay Chemical Corp Agri Chem Div
Morestan

Mulches, Erosion Control

American Excelsior Co
Excelsior Fiber, Curlex
Cal-Fiber Co
Cal-Fiber Mulch
Cellin Mfg Inc
Mulch Binder, Fiber-Lock, Hydraulic Mulch, Cellinj Fiber Mulch, Turfiber Mulch
Conwed Corp
Hydraulic Mulch, Hydro Mulch Fibers
Grass Fiber Inc
Grass Mulch
Grass Growers Inc
Terra Tack
Gulf States Paper Corp
Jacklin Seed Co
National Bark Sales
Top N'Turf
Reclamare Co
J-tac
Southern Hydro Mulch Supply Inc
Hydro-Tac
S P R A-Mulch
Superior Fiber Products Co
Weyerhaeuser

Nematocides

Drexel Chemical Co
Methyl Bromide & Chloropicrin, Plant Bed Gas
Mobay Chemical Corp Agri Chem Div
Nemacur
Stauffer Chemical Co
Metham, Vapam

Repellents, Animal

Hopkins Agricultural Chemical Co
Thiram, Thiram 42-S
International Reforestation Suppliers Inc
Deer-Away BGR, Deer-Away
Leffingwell Chemical Co
Hinder
T H Agricultural & Nutrition Co
Ammonia Soaps, Hinder

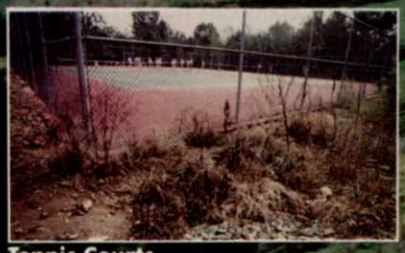
Repellents, Bird

National Bird Control
Roost-No-More
Stanford Seed Co
Borderland Black, Crow Chex, Stanleys

Soil Conditioner

Agro Chem Inc
American Pelletizing Corp
Pelletized Gypsum

JUST ABOUT EVERYWHERE YOU LOOK, YOU'LL FIND ANOTHER USE FOR ROUNDUP® HERBICIDE.



Tennis Courts

Sandtraps

Cart Paths

Renovations

Signposts

Think of all the places unsightly weeds and brush can plague your golf course. Around greens. In rough. In and around sandtraps. Near the clubhouse and tennis courts. Along cart paths, sidewalks and driveways. Along fencerows. Fortunately, there's one herbicide you can use in *all* these key problem areas—Roundup.®

No other herbicide is as effective or versatile as Roundup for control of tough emerged weeds and brush—wherever they grow. Sprayed on the foliage of actively growing labeled weeds, Roundup herbicide goes right down to the roots and controls the entire plant. So treated weeds won't grow back.

Yet Roundup is inactive in the soil, so it can't wash or leach out of treated areas to injure desirable vegetation.

See your chemical dealer soon for your supply of Roundup. And control golf course weeds effectively—from the first tee to the clubhouse.

FOR A FREE GUIDE TO ROUNDUP, CALL 1-800-621-5800 TOLL FREE. IN ILLINOIS, CALL 1-800-972-5858.

VERSATILE Roundup Herbicide by Monsanto EFFECTIVE

Monsanto

ALWAYS READ AND FOLLOW LABEL DIRECTIONS FOR ROUNDUP.
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Circle No. 131 on Reader Inquiry Card

CHEMICALS

continued

Aquatrols Corp of America
  Cal-Sul, Granulime, Reville
C B Dolge
Estech Inc (IL)
  Perlite, Vigoro
Faesy & Besthoff Inc
Grass Growers Inc
  Terra X Tract
ICI
International Reforestation Suppliers Inc
  Super Moisturizer
  Terra Sorb
Michigan Peat Co
  Baccto, Garden Magic
Oil-Dri Corp of America
  Terra Green
United States Gypsum Co
  Gypsum, Sof'N-Soil
USS Agri-Chemicals Div US Steel
  USS

Soil Fumigants

Bonide Chemical Co
Estech Inc (IL)
  Vapam, Vigoro
Faesy & Besthoff Inc
  Vapam
Hendrix & Dail Inc
  Chloropicrin, HD PIC, Methyl Bromide/Chloropicrin, MBC, MBC Concentrate, MBC-33
Hopkins Agricultural Chemical Co
  Mylone 50D
Shell Chemical Co
  D-D
Stauffer Chemical Co
  Metham, Vapam

Sticker Extender

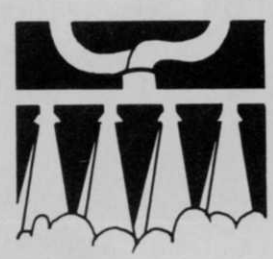
BASF Wyandotte Corp
  Citowett Plus
Bonide Chemical Co
Encap Products Co
  Spray-Stay
Hopkins Agricultural Chemical Co
  Plyac
Kalo Agricultural Chemicals
  Bio-Film
PBI-Gordon Corp
Rigo Co
  Spray-Ad 56
Rohm & Haas Co
  Triton
Stull Chemical Co
  Bivert
Superior Fiber Products Co
Wilt-Pruf Products Inc
  Spray-Stay

Tree Dressings

Bartlett Mfg Co
Bonide Chemical Co
Samuel Cabot Inc
  Healing Paint, Cabot's Tree
Coopers Creek Chemical Corp
  C-4

Wetting Agents

Agro Chem Inc
Ashland Chemcal Co
  Surfactants
Aquatrols Corp of America
  Aqua-Gro 'L', Aqua-Gro 'S'
BASF Wyandotte Corp
  Citowett Plus
Bonide Chemical Co
W A Cleary Chemical Corp
  All Wet
Hopkins Agricultural Chemical Co
  Neptune
Kalo Agricultural Chemicals
  Hydro-Wet
Lakeshore Equipment Lesco Products Div
  Lesco Wet
Montco Products Corp
  Surf-Side
Mallinckrodt Inc
  Aquagro
PBI-Gordon Corp
Rohm & Haas Co
  Triton
T H Agriculture & Nutrition Co
  Dimethylpolysiloxane, Activate 3



4. Chemical Companies

J & L Adikes Inc
See Adco Works

Adco Works
PO Box 310
Hollis NY 11423
212-739-0701

Agro Chem Inc
11150 Addison
Franklin Park IL 60131
312-455-6900

Agricultural Service Corp
PO Box 101
Harrisburg OR 97446
503-995-6754

Allied Chemical
Box 2120
Houston TX 77001
713-960-7924

American Cyanamid Co
Berdan Ave
Wayne NJ 07470
201-831-2000

American Excelsior Co
850 Ave H East
PO Box 5067
Arlington TX 76011
817-640-1555

American Pelletizing Corp
PO Box 3628
Des Moines IA 50322
515-278-5900

The Andersons
PO Box 119
Maumee OH 43537
419-893-5050

Applied Biochemists Inc
5300 W County Line Rd
Mequon WI 53092
800-558-5106

Aquashade Inc
PO Box 198
Eldred NY 12732
914-557-8077

Aquatrols Corp of America
1432 Union Ave
Pennsauken NJ 08110
609-665-1130; 800-257-7797

Ashland Chemical Co
PO Box 2219
Columbus OH 43216
614-889-3333

Bartlett Mfg Co
3003 E Grand Blvd
Detroit MI 48202
313-873-7300

BASF Wyandotte Corp
100 Cherry Hill Rd
Parsippany NJ 07054
201-263-0200

BFC Chemicals Inc
4311 Lancaster Pike
PO Box 2867
Wilmington DE 19805
302-575-7850

Bonide Chemical Co
Two Wurz Ave
Yorkville NY 13495
315-736-8231

Samuel Cabot Inc
One Union St
Boston MA 02108
617-723-7740

Cal-Fiber Co
625 S Anderson St
Los Angeles CA 90023
213-268-0191

Cellin Mfg Inc
9610 Gunston Cove Rd
Lorton VA 22079
703-690-1195; 800-336-3074

★ Chevron Chemical Co
575 Market St Rm 3544
San Francisco CA 94105-2856

★ Ciba-Geigy Corp
PO Box 18300
Greensboro NC 27419
919-292-7100

C-I-L Inc
171 Queens Ave

ORTHENE–INSECT PROTECTION AT ITS BEST.

ORTHENE® Tree & Ornamental Spray is a giant step forward in protection. It kills a wide range of insects, on contact and with a lasting residual action. In fact, it's probably the only insecticide you need.

Here are some of the insects it kills; aphids, bagworms, birch leafminer, tent caterpillar, Douglas Fir tussock moth larvae, gypsy moth larvae, webworms, scales, California oakworm, spring and fall cankerworms, Nantucket pine tip moth larvae, and adult root weevil.

AVOID ACCIDENTS: For safety, read the entire label including precautionary statements. Use all chemicals only as directed.

FOR PROFESSIONAL USE
ORTHOPRO

Chevron
ORTHO
Chevron Chemical Company

TM's ORTHO, CHEVRON, CHEVRON DESIGN, ORTHENE – REG. U.S. PAT. & T.M. OFF.

Please send me more information on ORTHENE.

Name_____

Company_____

Street Address_____

City_____ State_____ Zip_____

Mail to: R. G. Gras, Chevron Chemical Company, 575 Market Street, San Francisco, California 94105

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Perfect Partners

IBDU® and Sulfur Coated Urea

A new concept in slow release fertilizers to give you high performance at an economical cost.

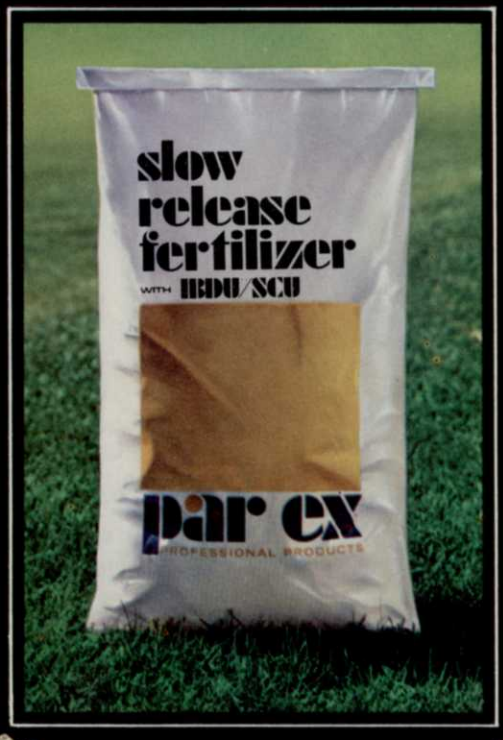
Now you can get all the performance of a slow release fertilizer at a cost lower than most other professional fertilizer products.

New IBDU/SCU™* mixes combine three nitrogen sources—IBDU, Sulfur Coated Urea and Urea—to give your turf short, intermediate and long nitrogen release. This three-stage release results in a constant, even rate of turf feeding that lasts for up to 90 days.

Yet the price of IBDU/SCU fertilizers is less than you would expect to pay.

A First for Turf

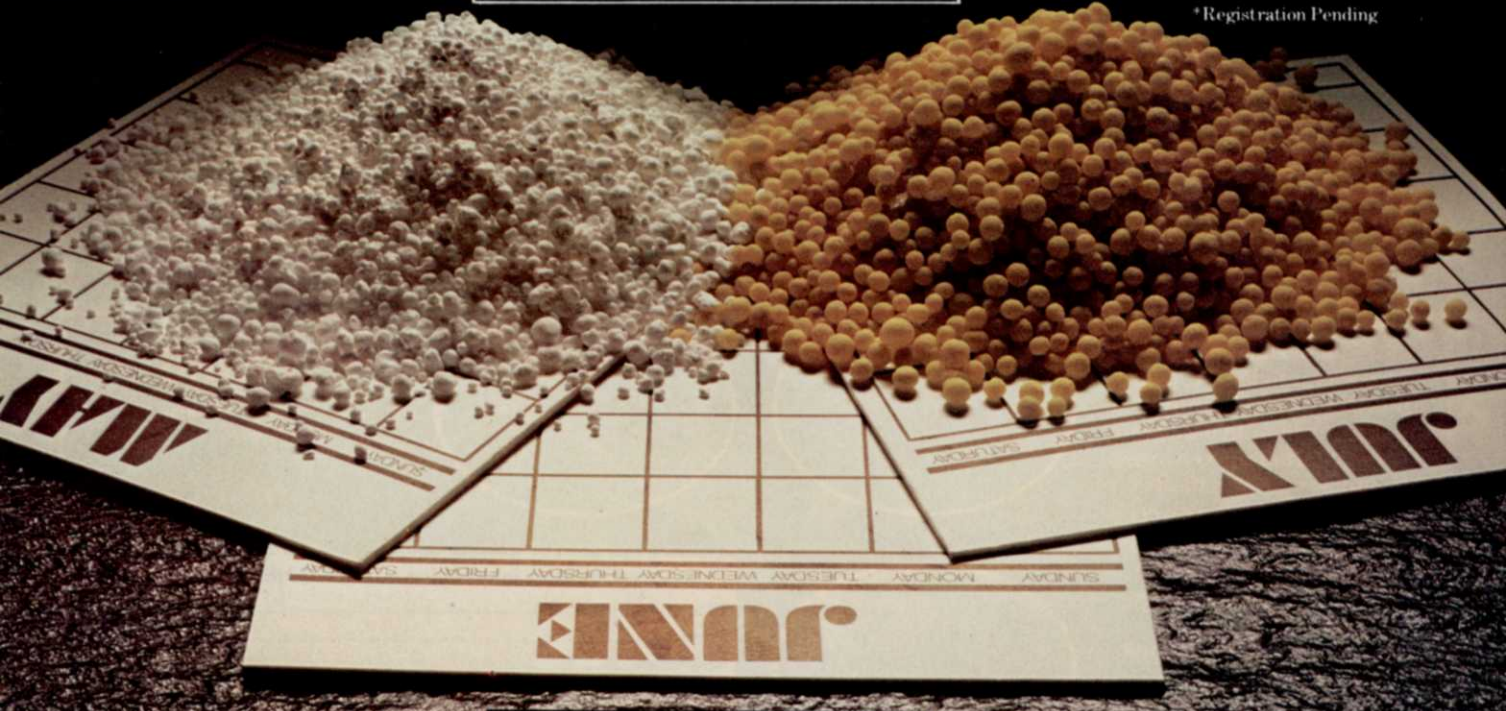
New IBDU/SCU fertilizer mixes can provide your turf a combination of features never before available in a single fertilizer. It gives your turf all the benefits of IBDU, the highest performance slow release nitrogen available, with the proven benefits of a high quality prilled Sulfur Coated Urea. Plus, there's water soluble urea to get your turf off to a fast, green start. IBDU/SCU fertilizers are available in a variety of complete mixes, custom formulated to regional turf requirements.



See your local distributor or PAR EX representative about the new IBDU/SCU fertilizer mixes. They just might be the perfect partner for your fertilizer budget.

Estech, Inc.
Professional Products Division
P.O. Box 1996 Winter Haven, FL 33880

*Registration Pending



par ex®
PROFESSIONAL PRODUCTS

Circle No. 112 on Reader Service Card.

Chemical Companies

continued

PO Box 5201
London ON N6A 4L6
Canada
519-672-9220

Clean-Flo Laboratories Inc
4342 Shady Oak Rd
Hopkins MN 55343
800-328-6656; 612-935-2137

W A Cleary Chemical Corp
1049 Somerset St
Somerset NJ 08873
201-247-8000

Conrel
110 A Street
Needham Heights MA 02194
617-449-3970

Conwed Corp
PO Box 43237
St Paul MN 55164
612-221-1100

Coopers Creek Chemical Corp
River Road
West Conshohocken PA 19428
215-828-0375

Creative Sales Inc
222 N Park Ave
Box 501
Fremont NE 68025
402-727-4800

Crystal Chemical Co
1525 N Post Oak Rd
Houston TX 77055
713-682-1221

Davey Tree Experts Co
117 S Water St
Kent OH 44240
216-673-2027

Diamond Shamrock Ag Chem Div
1100 Superior Ave
Cleveland OH 44114
216-694-5041

C B Dolge
11 Ferry Lane
Westport CT 06880
203-227-9591

★Dow Chemical USA
9001 Bldg
Midland MI 48640
517-636-0936

Drexel Chemical Co
2487 Pennsylvania
PO Box 9306
Memphis TN 38109
901-774-4370

E I du Pont de Nemours & Co
Wilmington DE 19898
302-774-2132

★Elanco Prods Co
1740 S Alabama St
Indianapolis IN 46285
317-261-3638

★Encap Prods Co
PO Box 278
Mt Prospect IL 60056
312-593-6464

★Estech Inc
PO Box 1996
Winter Haven FL 33880
813-294-7793

Estech Inc
30 N La Salle St
Chicago IL 60602

Faesy & Besthoff Inc
143 River Road
Edgewater NJ 07020
201-945-6200

FBC Chemicals Inc
See BFC Chemicals Inc

Fuerst Brothers Inc
PO Box 271
Rhinebeck NY 12572
914-876-3575

Grass Fiber Inc
520 E Second St
Junction City OR 97448
503-998-6812

Grass Growers Inc
424 Cottage Pl
Plainfield NJ 07060
201-755-0923

Great Lakes Biochemical Co
6120 W Douglas Ave
Milwaukee WI 53218
414-464-1200

Great Salt Lake Mineral & Chemicals Corp
PO Box 1190
Ogden UT 84402
801-731-3100

Jonathan Green & Sons Inc Seedsman
Squankum-Yellowbrook Rd
Farmingdale NJ 07727
201-938-7007

Gulf States Paper Corp
PO Box 3199
Tuscaloosa AL 35404
205-553-6200

Hendrix & Dail Inc
803 Industrial Blvd
PO Box 648
Greenville NC 27834
919-758-4263

Hooker Chemical
PO Box 344
Niagara Falls NY 14302

Hopkins Agricultural Chemical Co
PO Box 7532
Madison WI 53707
608-222-0624

ICI
PO Box 751
Wilmington DE 19897

International Reforestation Suppliers Inc
2100 W Broadway
PO Box 5547
Eugene OR 97405
503-345-0597

International Spike
PO Box 1750
Lexington KY 40593
800-354-9360

Kalo Agricultural Chemicals
4550 W 109 St
Overland Park KS 66211
913-649-5525

Kalo Inc
9233 Ward Pkwy
Kansas City MO 64114
800-821-3172

★Lakeshore Equipment & Supply Lesco Prods Div
300 S Abbe Road
Elyria OH 44036
216-323-7544

Lebanon Chemical Corp
PO Box 647
Danville IL 61832
217-446-0983

Leffingwell Chemical Co
111 S Berry
Brea CA 92621
714-871-1991

Liqui*Lawn Corp
4548 Emery Industrial Pkwy
Warrensville Hts OH 44128
216-831-3610

Loft-Kellogg Seed Inc
322 E Florida St
Milwaukee WI 53204
414-276-0373

Maag Agrochemicals Hoffman-LaRoche
340 Kingsland St
Nutley NJ 07110
201-235-3633

★Mallinckrodt Inc
PO Box 5439
St Louis MO 63147
314-982-5044

J J Mauget Co
2838 N Naomi St
PO Box 3422
Burbank CA 91504
213-849-2309

Michigan Peat Co
PO Box 66388
Houston TX 77266
800-231-6211; In TX 713-522-0711

Miller Chemical & Fertilizer Corp
PO Box 333
Hanover PA 17331

Chemical Companies

continued

★Milwaukee Metropolitan Sewerage District-Milogranite Sls
735 N Water St
Milwaukee WI 53202
414-278-2034

3M/Agricultural Prods
Bldg 223-1N-05
St Paul MN 55144
612-733-3733

★Mobay Chemical Corp Agri Chem Div
Specialty Prods Group
Box 4913 Hawthorn Rd
Kansas City MO 64120
816-242-2000

★Monsanto Co
800 N Lindbergh Blvd
St Louis MO 63167

Montco Products Corp
Box 404
Ambler PA 19002
215-628-3144

MSD/AGVET Div Merck & Co
PO Box 2000
Rahway NJ 07065
201-574-6463

Nalco Chemical Co
2901 Butterfield Rd
Oak Brook IL 60521
312-887-7500

National Bark Sales
1365 N Orchard St
Boise ID 83707
208-375-0656

National Bird Control
PO Box 1
Skokie IL 60076
312-675-2368

Occidental Chemical Co
PO Box 198
Lathrop CA 95330
209-858-2511

Oil-Dri Corp of America
522 N Michigan Ave
Chicago IL 60611
800-621-7191; In IL 312-321-1515

Olin Corp
Box 991
Little Rock AR 72203
501-378-3727

PBI-Gordon Corp
300 S Third St
Kansas City KS 66118
816-421-4070

Pennwalt Corp
Three Pkwy
Philadelphia PA 19102
215-587-7000

Plant Marvel Laboratories Inc
1507 Arnold St
Chicago Hts IL 60411
312-757-7500

★Prentiss Drug & Chemical Co
363 Seventh Ave
New York NY 10001
212-736-6766

Reclamare Co
20727 Seventh Ave S
Seattle WA 98148
206-824-2385

Rhone-Poulenc Chemical Co Agrochem Div
Box 125
Black Horse Lane
Monmouth Junction NJ 08852
201-297-0100

RIGO Co
PO Box 89
Buckner KY 40010
502-222-1456

Rohm & Haas Co
Independence Mall West
Philadelphia PA 19105
215-592-3000

Sandoz Inc
480 Camino Del Rio
San Diego CA 92108

O M Scott & Sons Co Proturf Div
Marysville OH 43040
513-644-0011

Shell Chemical Co
One Shell Plaza
900 Louisiana St
Houston TX 77002
713-241-6161

Sierra Chemical Co
1001 Yosemite Dr
Milpitas CA 95035
408-263-8080

Southern Hydro Mulch Supply Inc
2346 Joe Field Rd
Dallas TX 75229
214-263-0142

S P R A-Mulch
PO Box 189
Mattoon IL 61938
217-235-0561

Sta-Green Plant Food Co
PO Box 540
Sylacauga AL 35150
205-245-5282

Stanford Seed Co
560 Fulton St
PO Box 366
Buffalo NY 14240
716-825-3300

★Stauffer Chemical Co
Westport CT 06881
203-222-3000

Stull Chemical Co
1006 Paulsun
San Antonio TX 78219
512-227-5255

Sudbury Laboratory Inc
572 Dutton Rd
Sudbury MA 01776
617-443-8844

Superior Fiber Products Co
1201 65th St
Baltimore MD 21237
301-866-4450

Sweepster
2810 SW Baker Rd
Dexter MI 48130
313-426-3961

T H Agriculture & Nutrition Co
5220 Speaker Rd
Kansas City KS 66106
913-281-4100

TUCO Ag Chemicals Div Upjohn Co
9823-190-1
Kalamazoo MI 49001
616-323-4000

Union Carbide Ag Prod Co
TW Alexander Ave
PO Box 12014
Research Triangle Park NC 27709

United States Gypsum Co
101 S Wacker Drive
Chicago IL 60606
312-321-3863

US Borax
3075 Wilshire Blvd
Los Angeles CA 90010

USS Agri-Chemicals Div US Steel
PO Box 1685
Atlanta GA 30328
404-572-4000

Vaughan's Seed Co
Chimney Rock Rd
Bound Brook NJ 08805
201-356-4200

Velsicol Chemical Corp
341 E Ohio St
Chicago IL 60611
314-670-4665

Vineland Chemical Co
W Wheat Rd
PO Box 745
Vineland NJ 08360

Weyerhaeuser
2525 S 336
Federal Way WA 98003
206-924-2345

Wilt-Pruf Products Inc
PO Box 4280
Greenwich CT 06830
203-531-4740

Zoecon Corp Ag Chem Div
PO Box 975
Palo Alto CA 94306

5. Seed Companies

★Adelphi
182-12 93rd Ave
Jamaica NY 11423
212-739-4400

J & L Adikes Inc
182-12 93rd Ave
Jamaica NY 11423
212-739-4400

Agriculture Service Corp
5240 Gaffin Rd SE
Salem OR 97301
503-581-8899
And
PO Box 101
Harrisburg OR 97446
503-995-6754
Certified Turfgrass Seed Names: Pennant Perennial Ryegrass, Premier Perennial Ryegrass

E F Burlingham & Sons
1936 19th Ave
PO Box 217
Forest Grove OR 97116
503-357-2141
Certified Turfgrass Seed Names: Falcon Tall Fascue, Bonnieblue Kentucky Bluegrass, Majestic Kentucky Bluegrass, Birka Kentucky Bluegrass, Sydsport Kentucky Bluegrass, Belle Perennial Ryegrass, Banner Chewings Fescue

Ernst Crownvetch Farms
RD 5 Box 806
Meadville PA 16335
814-425-7276

★Garfield Williamson Inc
1072 West Side Ave
Jersey City NJ 07306
201-435-3500
Certified Turfgrass Seed Names: Omega Perennial Ryegrass, Eclipse Kentucky Bluegrass, Jaguar Tall Fescue

Grasslyn Inc
641 Pine Grove Rd
State College PA 16801
814-238-0133
Certified Turfgrass Seed Names: Penngift Crownvetch

Great Western Seed Co
950 Jackson
PO Box 387
Albany OR 97321
503-926-5892
Certified Turfgrass Seed Names: Clemfine Tall Fescue, Rebel Tall Fescue, Prelude Perennial Rye, Palmer Perennial Rye, Diplomat Perennial Rye, Yorktown II Perennial Rye, Baron Kty Blue, Ram 1 Kty Blue

Jonathan Green & Sons Inc Seedsman
Squankum-Yellowbrook Rd
Farmingdale NJ 07727
201-938-7007
Certified Turfgrass Seed Names: Premier Per Rye, Parade Kentucky Bluegrass, Adelphi Kentucky Bluegrass, Columbia Kentucky Bluegrass, Citation Per Rye

Geo W Hill & Co
8010 Dixie Hwy
Florence KY 41042
606-371-8423
Certified Turfgrass Seed Names: Regal Perennial Ryegrass, Eclipse Kentucky Bluegrass, Rebel Fineleaf Tall Fescue

★International Seeds Inc
PO Box 168
Halsey OR 97348
503-369-2251

★Jacklin Seed Co
W 5300 Jacklin Ave
Post Falls ID 83854
208-773-7581
Certified Turfgrass Seed Names: Flying Kentucky Bluegrass, Glade Kentucky Bluegrass, Ram I Kentucky Bluegrass, Cheri Kentucky Bluegrass, Wabash Kentucky Bluegrass, Elka Perennial Ryegrass, Reubens Canada Bluegrass

Jenks White Seed Co Div Jacklin Seed
PO Box 45
Tangent OR 97389

Kellogg Inc: Seeds & Supplies
322 E Florida St
Milwaukee WI 53204
414-276-0373
Certified Turfgrass Seed Names: Baron Kentucky Bluegrass, Ram I, Glade, Fylking, Adelphi, Touchdown, Majestic Kentucky Bluegrass, Jamestown Chewings Fescue, Yorktown, Yorktown II, Diplomat, Derby, Manhatten, Pennfine Perennial Ryegrass

★Lakeshore Equipment Lesco Products Div
300 S Abbe Rd
Elyria OH 44036
216-323-7544
Certified Turfgrass Seed Names: CBS Ryegrass, Columbia Ky Blue, Citation Ryegrass, Birdie Ryegrass, Manhatten Ryegrass, Penncross Bentgrass, Penneagle Bentgrass, Falcon Tall Fescue, Olympic Tall Fescue, Fortress Red Fescue

★Lofts Pedigreed Seed Co
PO Box 146
Bound Brook NJ 08805
201-356-8700

Mangelsdorf Seed Co
4500 Swan Ave
St Louis MO 63110
314-535-6700
Certified Turfgrass Seed Names: Arboretum Ky Bluegrass, Adelphi Ky Bluegrass, Baron Ky Bluegrass, Fylking Ky Bluegrass, Glade Ky Bluegrass, Warren's A-34 Ky Bluegrass, Manhattan Perennial Ryegrass, Pennfine Perennial Ryegrass, Regal Perennial Ryegrass

Manhattan Ryegrass Growers Assoc
1349 Capitol St NE
Salem OR 97303
503-363-1022

Midwestern States Fescue Assn
149 Park Central
Springfield MO 65806

★Northrup King Co
1500 NE Jackson St
Minneapolis MN 55413
612-781-8011

Oregon Fine Fescue Commission
1349 Capitol St NE
Salem OR 97303
503-363-1022

★Oregon Ryegrass
4093 12th St
Salem OR 97302

Oseco BC Ltd Oregon Ryegrass Commission
PO Box 3366
Salem OR 97302

Oseco Inc
PO Box 219
Brampton ON L6V 2L2
Canada
416-846-5080
Certified Turfgrass Seed Names: Baron Kentucky Bluegrass, Birka Kentucky Bluegrass, Sydsport Kentucky Bluegrass, Yorktown II Perennial Ryegrass, Omega Perennial Ryegrass, Emerald Creeping Bentgrass

Patten Seed & Turfgrass Co
119 Murrell Ave
Lakeland GA 31635
912-482-3131
Certified Turfgrass Seed Names: Centi-Seed, Tifgreen, Tifdwarf, Tifway, Tifway II, Emerald, Meyer Z-52, Raleigh, Floratam

Penncross Bentgrass Assn
1349 Capitol St NE
Salem OR 97303
503-363-1022

Pennfine Perennial Ryegrass
PO Box 923
Minneapolis MN 55440

Otto Pick & Sons Seeds Ltd
Box 126
Richmond Hill ON L4C 4X9
Canada
416-884-1147

Otto Pick & Sons Seeds Ltd
4750 Lesage CP 151
St Hyacinthe PQ J2S 7B4
Canada
514-799-4586

Seed Companies

continued

Certified Turfgrass Seed Names: Banff Kentucky Bluegrass, Cheri Kentucky Bluegrass, Dormie Kentucky Bluegrass, Fylking Kentucky Bluegrass, Nugget Kentucky Bluegrass, Ram I Kentucky Bluegrass, Touchdown Kentucky Bluegrass, Barone Kentucky Bluegrass, Adelphi Kentucky Bluegrass, Merion Kentucky Bluegrass, Park Kentucky Bluegrass, Canon Canada Bluegrass, Common Canada Bluegrass, Reubens Canada Bluegrass, Agram Chewing Fescue, Jamestown Chewing Fescue, Pennlawn Creeping Red Fescue, Tournament Hard Fescue, Blazer Ryegrass, Fiesta Ryegrass, Derby Reygrass, Manhattan Reygrass, Pennfine Ryegrass, Exetes Coloniale Bent Grass, Penncross Creeping Bent Grass, Emerald Creeping Bent Grass, Astoria Coloniale Bent Grass, Seaside Creeping Bent Grass, Highland Coloniale Bent Grass

Otto Pick & Sons Seeds Ltd
RR 2 Box 4
Winnipeg MB R3C 2E6
Canada
204-633-0088

Pickseed West Inc
PO Box 888
Tangent OR 97389
503-926-8886
Certified Turfgrass Seed Names: Banff Kentucky Bluegrass, America Kentucky Bluegrass, Touchdown Kentucky Bluegrass, Fiesta Turf-Type Perennial Ryegrass, Blazer Turf-Type Perennial Ryegrass, Dasher Turf-Type Perennial Ryegrass, Agram Chewings Fescue, Tournament Hard Fescue, Exeter Colonial Bentgrass, Kingstown Velvet Bentgrass

Rothwell Seeds Ltd
PO Box 511
Lindsay ON K9V 4S5
Canada
705-324-9591

Rugby Kentucky Bluegrass
PO Box 923
Minneapolis MN 55440
Certified Turfgrass Seed Names: Rugby Kentucky Bluegrass

★O M Scott & Sons Co Proturf Div
Marysville OH 43040
513-644-0011
Certified Turfgrass Seed Names: Proturf

Seaboard Seed Co
PO Box 117
Bristol IL 60512
312-553-5801

Seed Production & Introduction Corp (S P I C)
PO Box 923
Minneapolis MN 55440

Southern Turf Nurseries (Sprigs)
PO Box 714
Tifton GA 31794

Stanford Seed Co
560 Fulton St
PO Box 366
Buffalo NY 14240
716-825-3300
Certified Turfgrass Seed Names: Koket Chewings Fescue, Old English, Crown Vetch, Pennfine Perennial Ryegrass, Rugby Kentucky Bluegrass

Stanford Seed Co
809 N Bethlehem Pike
Spring House PA 19477
215-643-6470
Certified Turfgrass Seed Names: Rugby Bluegrass, Pennstar Bluegrass, Pennfine Ryegrass, Manhattan Ryegrass, Penncorsss Bentgrass, Penneagle Bentgrass

Sunbelt Seeds Inc
2055 Tucker Industrial Rd
Tucker GA 30084
404-491-1311

Tee-2-Green Corp
PO Box 250
Hubbard OR 97032
800-547-0255

Turf Plantation
202 E Washington
Jonesboro AR 72401
501-972-5549
Certified Turfgrass Seed Names: Tifway 419, Tifway 328

★Turf-Seed Inc
44 G St
PO Box 250
Hubbard OR 97032
503-981-9571
Certified Turfgrass Seed Names: Citation Ryegrass, Omega Ryegrass, Columbia Bluegrass, Shasta Bluegrass, Shadow Fine Leaf Fescue, Fortress Fine Leaf Fescue, Olimpic Turf Type Tall Fescue

Vaughan's Seed Co
5300 Katrine Ave
Downers Grove IL 60515
312-969-6300
Certified Turfgrass Seed Names: Cheri, Adelphi, Glade, Reubens Canada Blue, Citation, Master Blend

Vaughan's Seed Co
Chimney Rock Rd
Bound Brook NJ 08805
201-356-4200
Certified Turfgrass Seed Names: Adelphi Kentucky Bluegrass, Glade Kentucky Bluegrass, Cheri Kentucky Bluegrass, Merit Kentucky Bluegrass, Touchdown Kentucky Bluegrass, Pennant Perennial Ryegrass, Citation Perennial Ryegrass, Regal Perennial Ryegrass

Warren's Turf Nursery Inc Seed Div
7502 S Main St
Crystal Lake IL 60014
815-455-5100
Seed Div
PO Box 459
Suisun CA 94585-0459
707-422-5100; 422-5101
Certified Turfgrass Seed Names: A-34 BenSun Kentucky Bluegrass

Whitney Dickinson Seeds Inc
52 Leslie St
Buffalo NY 14211
716-896-1111
Certified Turfgrass Seed Names: Pennfine Perennial Ryegrass, Manhattan Perennial Ryegrass, Manhattan II Perennial Ryegrass, Rugby Kentucky Bluegrass

COMING IN OCTOBER

Profile of Government Landscapers

WEEDS TREES & TURF

LAKESHORE: OHIO TURF DEALER GROWS INTO NATIONAL MANUFACTURER

In 1961, there were three ways for a golf course superintendent to buy products he needed; from an agricultural supplier, garden center dealer or, in a few cities, from a localized "turf distributor" such as Bob Burkhardt in Rocky River, Ohio. Regional distributors of turf and landscape supplies hadn't developed in most areas of the United States by then.

Today, Bob Burkhardt looks back with partner Jim FitzGibbon and smiles, almost in disbelief, at the state of Lakeshore Equipment & Supply Co., one of the first "regional turf suppliers," now a national distributor of turf supplies. The $75,000 gross of 1962 has grown and is now approaching $40 million including chemical and equipment manufacturing divisions.

FitzGibbon, a lumber broker and hardware merchant, joined up with Bob Burkhardt in the early 1960s. Since 1962, Lakeshore has had four homes in the Cleveland area, but next year the company returns its offices to where it started out, Rocky River. Lakeshore is in the process of rennovating the old hardware store to make it the new headquarters for LESCO.

The company's current headquarters in Elyria, OH, doesn't have the Musac atmosphere of some companies. It is more like the floor of the stock exchange with orders being announced over the intercom and all kinds of activity in the hallways and offices. The only time the principals really have time to discuss business is over lunch.

As the name implies, Lakeshore started as an equipment and supply dealer located on the south shore of Lake Erie, supplying local golf courses, cemeteries, greenhouses and nurseries. More than 80% of its business in 1963 was equipment. Lakeshore represented National, West Point Products, Sod Master, Goodall, H.D. Hudson and Smithco, among others. Its first salesman, Herb Cole, came from H.D. Hudson in 1963. Sales people Gene Probasco, Ed Williams, Barb Craycraft and Ron Giffen joined the company shortly thereafter.

FitzGibbon and Burkhardt weren't satisfied with the territorial limitations placed on equipment distributors by manufacturers. They had a concept for a regional business and restrictive territories were counterproductive. Even so, Lakeshore grew to become the largest distributor of many equipment lines. "There are two thoughts on marketing equipment," says FitzGibbon. "One is to sell by territory. The second is to allow competition to take its course." Though the second choice was not popular in the turf industry, Lakeshore was ready to let competition take its course. The course led straight to growth.

In the early days. Lakeshore also sold a line of fertilizers manufactured by Agrico. Today, its subsidiary Ag Industries Mfg., Columbia, Alabama, produces sulfur-coated urea and sulfur-coated fertilizers. Facilities in Wellington, OH, produce fertilizer, formulate chemicals and serve as a warehouse. Manufacturing, formulating and warehouse facilities are also located in Sebring, FL, and a new warehouse is located in Landover, MD.

Lakeshore added chemicals to its line in 1970 when Morton Chemical was selling out its line of turf herbicides, Lakeshore bought the products and originated its first private label chemicals, Lescopex—MCPP—and Lesopar—a combination of MCPP and 2,4-D. Today, Lakeshore formulates a line of 20 proprietary chemicals including Lescosan, A,4-D (2,4-D), Dursban® and Diazinon® granular and fertilizer combinations. Plans for 1983 include more formulating facilities and more facilities for the manufacture of after-market replacement parts for turf equipment and golf course accessories.

If Lakeshore has symbol to tout, it is its LESCO Truck showroom system. With 21 trucks and growing, Lakeshore brings a showroom on wheels to its golf course customers once a month, or more often if needed. Chemicals, equipment and accessories are displayed and supplied from the trucks. In between salesmen's visits, customers can order directly from Elyria. Ads encourage phone orders suggesting customers "Call Barb" for fast service.

Lakeshore's first LESCO Truck was placed in Florida and proved to be a disappointment. A second chance in Florida proved to be successful, however, and Lakeshore has expanded its truck routes ever since. Prior to instituting truck sales, Lakeshore served the states of Ohio, Indiana, Michigan, Kentucky, Pennsylvania and Illinois. Today, the company serves 25 states with its sales force and the entire country with its mail order business.

The trucks have enabled Lakeshore to grow more into Southern markets which have year-round sales. Growth there has also encouraged Lakeshore to enter the overseeding market. A relationship with Turf Seed, Inc. in Hubbard, OR, has prospered with CBS overseeding mixture. Future seed varieties are being tested by Turf Seed's Dr. Bill Meyer.

The lawn service business has given Lakeshore another area for growth. FitzGibbon sees continued growth there as well as in the golf course and nursery areas. A new line of spreaders, including an electric model, might be the beginning of a national equipment manufacturing division. "We already make many replacement parts for golf equipment, we just don't assemble the units yet," says FitzGibbon. **WTT**

VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

Q: *I would like to know as much as possible about gummosis. It is common here on Russian olive and honey locust, and I have been told that it is a sure sign of stress. What kind of stress? Water, nutrient, light, insects? What is it? How does it form? Where does it come from? And would it be toxic to trees that are close or are planted as replacements in the same spot? (Colorado)*

A: Gummosis is defined as the exudation of sap which breaks out to the surface. Discharges may be due to the attack of a parasite, often in another part of the plant. The peach borer, working in the crown, may cause gummosis of trunk and branches. Gummosis caused by the fungus, *Botryosphaeria dothidea,* has been reported recently on peach as well as currant, apple, almond and blueberry. It is highly possible that a biological stress or combination of stresses weakened the trees and predisposed them to borers or a fungal infection which, in turn, caused gummosis. Biological stress can be any environmental factor capable of inducing a potentially injurious physical or chemical change in a living organism. These factors include drought, defoliation, high and low temperatures, transplanting, wounding and chemical (i.e. herbicides, air pollution) stresses. Both water stress and defoliation have reportedly predisposed several tree species to *Botryosphaeria dothidea,* the fungal organism mentioned earlier as causing gummosis.

Contact your local Cooperative Extension Service for information concerning the nearest diagnostic laboratory to which you can submit samples. Perhaps Dr. James R. Feucht, Professor, Landscape Plants, Department of Horticulture, Colorado State University, could be of assistance. You may also want to contact Dr. Schoeneweiss at the Illinois Natural History Survey in Urbana, Illinois, for further information on environmental stress and predisposition.

Q: *We've tried Roundup to control kikuyugrass when renovating Kentucky bluegrass turf but the kikuyugrass begins reestablishing almost immediately. Is there another chemical or method that does a better job? (California)*

A: An application of glyphosate (Roundup) followed by thatch removal, overseeding and an application of Siduron to limit kikuyugrass seedling germination produces the best results.

Initial competition of the overseeded grasses also is very important in reducing kikuyugrass regrowth. Perennial ryegrass and tall fescue which germinate and become established much more rapidly than Kentucky bluegrass are recommended.

Q: *Can you recommend a publication on diagnosing tree problems that can be used to help train fieldmen? (Ohio)*

A: Identifying Shade Tree Problems (A3073) by Dr. Gayle Worf, Professor of Plant Pathology at the University of Wisconsin, is an excellent aid for field personnel. It contains color prints, is reasonably priced and is available to out-of-state purchasers from Agricultural Bulletin Building, 1535 Observatory Drive, Madison, Wisconsin 53706.

Q: *I read recently that lime reduces the number of grubs in turf. Is this true can lime be used as an effective control for beetle grubs? (New York)*

A: Lime does appear to provide some kind of physical or chemical barrier which prevents the female beetle from entering the soil and laying eggs. However, the barrier is temporary, probably lasting only a few days. Further testing is necessary to determine the effectiveness of lime in reducing white grub populations, but current indications are that lime alone will not provide adequate control.

Q: *What causes the leaves of black locust to turn brown every summer? Is it a disease and can it be controlled? (West Virginia)*

A: The larvae of the locust leafminer cause the leaflets to turn brown by mining between the leaf surfaces. Several insecticides are effective including Diazinon or carbaryl sprayed on foliage in late May and again in early July to control adult beetles.

Q: *Could the weight from unused mortar dumped on one side of a large slash pine cause injury to the root system? The mortar was removed after about a month but two large limbs have since died on that side. (Florida)*

A: Compaction and changes in water and oxygen availability can quickly cause injury to roots. Older trees and those in weakened condition are more seriously injured. Slash pines also are reportedly sensitive to pH changes in the soil. Lime from the mortar could have raised the pH to an unsuitable level.

Send your questions or comments to: Vegetation Management c/o WEEDS TREES & TURF, 757 Third Avenue, New York, NY 10017. Leave at least two months for Roger Funk's response in this column.

For information contact:
J & L ADIKES, INC.
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JACKLIN SEED CO.
Post Falls, ID. 83854
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Red Maple has adapted to regional growing conditions from Florida to northern Michigan.

FURTHER EXPLORATION IS NEEDED TO GET MORE OUT OF NATIVE PLANTS

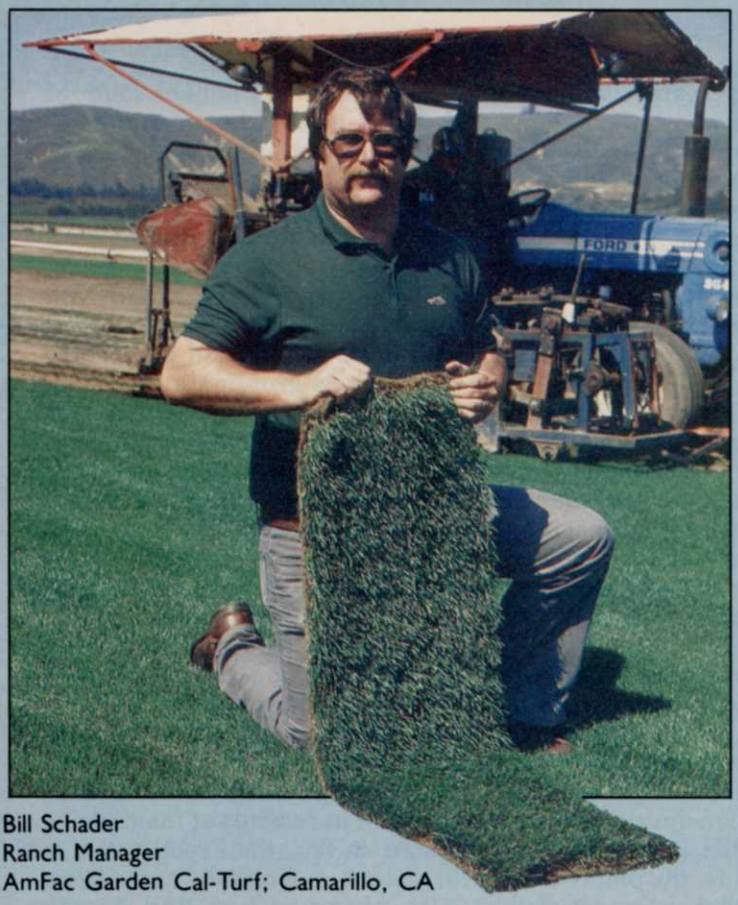
By DOUGLAS CHAPMAN

Plant exploration is one way to add diversity to the landscape. When one mentions plant exploration, Japan, China, Russia, and Poland first come to mind, but plant exploration in our country, stressing the factors of provenance and site adaption, is another way for American horticulture to develop its own distinct mark. We recommend selecting native plants from geographic regions, to be planted in those regions, e.g. Great Lakes, Northeast, Southeast, etc. By selecting outstanding natives, we are taking advantage of provenance, or regional adaption, and unique site adaption, e.g. a hickory that grows in the flood plain as well as upland fertile soils. What precedent is there for this type of development?

Dr. Fred Meyer, of the National Arboretum, recently stressed the outstanding development of Japa-

Continued on page 94

Douglas Chapman is horticulturist for Dow Gardens, Midland, Michigan.



Bill Schader
Ranch Manager
AmFac Garden Cal-Turf; Camarillo, CA

Columbia Kentucky Bluegrass is at the roots of a good sod business . . .

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Underground, Columbia produces a quick spreading rhizome system that allows sod to be harvested earlier. A good root system is important to turf health in hot, dry summer periods. Columbia's Fusarium Blight resistance makes it a perennial winning turf-type "blue".

The Rewards of Research...

These test plots at Camarillo, California, proved Columbia Kentucky Bluegrass was best suited to this area. Fusarium and rust damaged Baron, Victa, Glade, Park and Touchdown while Columbia rated second only to the experimental CHB-11A. As a result, Columbia was chosen as a vital part of the mixtures used in southern California sod.

Rankings from turf trials throughout the United States:

Kentucky Bluegrasses (1 = best)	Rutgers University 23 entries seeded—1976 data—1977-79 (3 yr. average)	Ohio State University 40 entries seeded—1978 data—1980	University of Illinois 20 entries seeded—1978 data—1980	Kansas State University 45 entries seeded—1979 data—1980	Camarillo California 25 entries seeded—1977 data—1978	University of Idaho 62 entries seeded—1979 data—1980
Columbia	2	3	1	13	2	6
Midnight	*	1	3	13	*	1
Baron	14	39	12	23	13	27
Adelphi	1	36	2	16	4	4
Victa	20	38	*	15	*	9
Touchdown	3	18	18	7	14	46
Merion	19	34	20	*	18	12

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nese horticulture. The one thing highlighting Japanese horticulture is the fact it developed internally from native plants for 1,000 years. They select, breed, and landscape their gardens with plants native to Japan. They rarely explored outside of the Japanese islands, while developing the best, by yet improving on what they had.

Certainly as we look across this country, we see the marks of English and, now the mark of, Japanese horticulture. It is possible that the main legacy that Japanese horticulture should give to American horticulture is to develop our native plants to the fullest.

Regional adaption of trees is certainly one of the main considerations in selecting and developing native trees, or regional cultivars. Rehder and Wyman suggest, the native range of *Acer rubrum* (Red Maple) is from northern Michigan to Florida, but a northern Florida Red Maple would not survive in Michigan. Conversely, a northern Michigan Red Maple would not thrive in Florida.

Provenance manifests itself not only in adaption but some unique physiological responses, e.g. photoperiodic effects on growth. Hanover at Michigan State University has shown clearly that plants native to northern climates are more photoperiodic responsive than those native to southern areas.

One of the most useful characteristics of this adaption would be juvenile northern Red Maple grown under continuous light will remain continuously vegetative, reaching 5 feet from 6 inch cuttings in one season. The same phenomenon is not as pronounced in southern Red Maple.

Further, provenance affects winter hardiness in northern areas and heat tolerance for southern natives. When selecting and developing cultivars for the Great Lakes Region, a line can be drawn from Columbus, Ohio (east and west), north of that line, the plants would be hardy throughout much of the Great Lakes, and natives south of that line would show adaption to the south-central and southeastern areas.

Site adaption, or, if you will, adaption to micro-climate, is a further reason for plant selection. Horticulturists have noted that Sugar Maples thriving in fertile, well-drained soils and an ecotype that thrives growing at edges of swampy areas or flood plains. This adaption to soil conditions is a real opportunity for nurserymen and horticulturists, alike, to select plants that will tolerate urban conditions. Certainly many of us have observed Red Maples growing in flood plains, also upland soils.

One must be continually alert to this condition or other variations from the norm. In the mid-Michigan area alone, we have observed *Carya ovata* (Shagbark Hickory) growing in traditional soils and in swamps or flood plains where, in fact, their root system is in water 4 to 6 months of the year. Also observed are Red Maple growing on sand hills and swamps and Sugar Maple, or its sub species, growing in heavy soils, as well as the traditional well-drained fertile sites.

It is paramount to select trees for site adaption while looking for trees that have outstanding aesthetic characteristics, such as scarlet or yellow fall color, columnar habit of growth.

Further, tolerance to insects; Crab Apple - aphid; Hackberry - nipple gall; and disease resistance, e.g. Crab Apple - fire blight and apple scab; Hackberry - witches broom; Sycamore - anthracnose. This resistance or tolerance may give us an opportunity to satisfy low maintenance needs while adding diversity to the landscape.

These are only food for thought, but by utilizing native trees that prove to be "spartans" or grown under urban conditions while showing resistance to pest problems, it gives us one way to cut maintenance costs. Further, by developing regional cultivars of native trees and shrubs, we strengthen local nurserymen while adding diversity to the plants available for the landscape. **WTT**

Several characteristics for cultivars of native trees worth observing include:

White Ash *(Fraxinus americana)* drought tolerance

Northern Red Oak *(Quercus rubra)* some salt tolerance oak wilt resistance

Red Maple *(Acer rubrum)* droughty soil tolerance

Bur Oak *(Quercus macrocarpa)* droughty soil tolerance

Russian Olive *(Elaeagnus angustifolia)* Fusicoccum elaeagni canker resistance

Hackberry *(Celtis occidentalis)* nipple gall resistance

Yew *(Taxus)* resistance to scales or black vine weevil

Rhododendron *(Rhododendron)* resistance to Phytophthora

White Birch *(Betula papyrifera)* resistance to birch leaf miner and or borer.

NEWS *from page 20*

INTERIOR

Indoor plant population increasing

Households that keep indoor plants have increased the average number of plants in each home 120% since 1975, according to a Phillipps Products Survey. The average number of houseplants in a home is now 21, up from 10 in 1975, although the percentage of households that actually keep plants has gone down from 81% to 76%.

Interior gardeners are not only caring for more plants, but over half of those polled expected to increase the number of plants in their homes in the future. The other 46% planned to keep the same number.

The most popular type of planter, according to the survey, is not plastic. Plastic, which was preferred in the 1975 poll, dropped to 33%, versus 36% for clay. The remainder was divided between among ceramic, wood, wicker, glass and metal.

NURSERY

PNA names Saia acting director

The Pennsylvania Nurserymen's Association has appointed Charles V. Saia as the acting executive director. He was previously the PNA field administrator and director of member services.

A native of Johnstown, he now lives in a suburb of Harrisburg. Prior to joining the PNA staff, Saia was a general manager and comptroller of a Harrisburg country club.

TeeJet

NEW
SPRAY NOZZLES and ACCESSORIES From
SPRAYING SYSTEMS CO.

NEW— *QuickJet*™ Nozzle Assemblies
A unique new system of quickly interchangeable self-aligning spray nozzles and spray tips. To provide choice of spray droplet size, in full cone, hollow cone and flat spray patterns. ¾" NPT (M) inlet conn. Write for Bulletin 195.

NEW— Model 146 *DirectoValve*®
For remote "on-off" control of spray nozzles and booms from operator's location. Operates on 12 VDC system. Pressure range from 0 to 65 psi. 1¼" NPT (F) spray line connection. Write for Data Sheet 16108.

NEW— Model 244 Electrical Regulating Valve
For remote pressure control in agricultural spray applications. ¾" NPT (F) inlet and outlet conn. Operates on a 12 VDC system. Pressures to 100 psi. Write for Data Sheet 16994.

NEW— ¾" and 1" Nylon Liquid Strainers
Strainer head and bowl made of reinforced Nylon material for pressures to 75 psi. Threaded bowl can be easily unscrewed by hand. Write for Data Sheet 15353.

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Circle No. 144 on Reader Inquiry Card

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Ryegrass is a Natural on The Golf Course. Write For a Free Brochure That Details its Advantages

Including information on

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Versatile Oregon Ryegrass offers the Superintendant a multitude of advantages.

Ryegrass can be cut at 3/16th inch on putting greens, thrives when cut to 3/4 inch as well as at 1½ inches.

For those who want a superb putting surface, the newer fine-bladed, turf-type perennial ryegrasses are an excellent answer. The turf-types have fine color, are disease-resistant and mow beautifully.

In Southern climes, Superintendants may choose either the fine-bladed perennials or the old standby Oregon annual ryegrass for their winterseeding program.

In the North, the turf-type perennials have proven their quality and adaptability while Linn Perennial is still doing yeoman work as a utility grass.

All of them do a job in the rough, on the fairway or on tees.

Remember, Ryegrass not only germinates in a matter of 7-10 days, it responds rapidly to fertilization and does not require pampering.

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CHECK THESE PERFORMANCE FEATURES:

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For more information, write P. O. Box 996 or phone (402) 223-2391.

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Circle No. 122 on Reader Inquiry Card

WT&T PRODUCTS

Hole borer pushes its way under roads

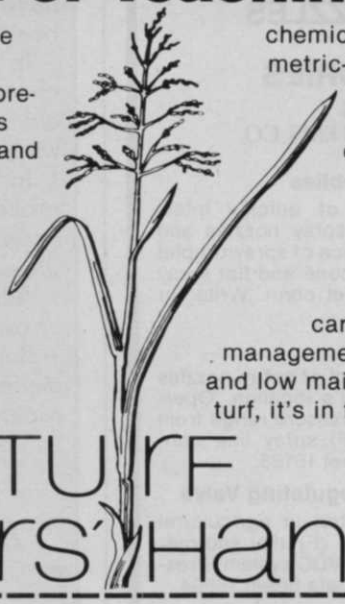
General Equipment has added the Hole-Mole M210 compaction type rod pusher/puller to its line of portable earth boring equipment. The Hole

Mole is designed to install pipe up to 8-in. in diameter under streets, roadbeds and other obstructions that cannot

Finally, An Aid For Teaching Turfgrass

Superintendents, Contractors, Lawn Care Managers, New, On-the-Job Reference. The Turf Managers' Handbook is a comprehensive, organized approach to turfgrass science and care. It has been designed and written by leading turf specialists from Purdue, Dr. William Daniel and Dr. Ray Freeborg, for on-the-job reference and as a text for students.

The book contains 150 illustrations and 96 color photographs. Data includes 240 tables and forms. Included are specifications for rootzones, employment, calculations for chemical applications, and extensive metric-imperial conversion. Business and technical aspects of turfgrass management are covered in this 424-page book. Planning, purchasing, hiring, construction, and plant selection are put together for easy on-the-job reference. Markets covered include lawn care, sod production, golf course management, cemeteries, athletic fields, and low maintenance areas. If it concerns turf, it's in the Turf Managers' Handbook.



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HBJ

WTT 92

be serviced by ususal trenching and plowing. The push/pull process pushes steel rods under an obstruction to a target trench where the service is to be installed and then retrieves the rods. The Hole-Mole works with any hydraulic system capable of delivering 5 to 20 gpm and 1500 to 2500 psi.
Circle No. 155 on Reader Inquiry Card

Myers pump offers high psi flexibility

The new BX6-12 high-pressure pump can be used for a wide range of applications. Weighing only 50 lbs., the unit can pump up to 8 gallons-per-minute at

up to 1,200 psi. The cast iron body features a Lexan window to check the lubricating oil and the crankshaft.
Circle No. 156 on Reader Inquiry Card

Royal Coach controls now have dual starts

Royal Coach/Buckner is producing all of its commercial and industrial solid state/electro-mechanical 12 station controllers with dual day and dual time starts. The model 34112 has two complete schedules that can be programmed for 14 different days each and different start times each day. Once programmed the schedules can be operated independently or together and completely revised in only a few minutes. The 34112 features solid state station timing from 0-60 minutes and a check switch. Easily installed, the pedestal is complete with all instructions and hardware for mounting.
Circle No. 157 on Reader Inquiry Card

Olympic is dark, low tall fescue

Turf-Seed Inc. is marketing a leafy, moderately low-growing tall fescue

Circle No. 102 on Reader Inquiry Card

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TAKE-ALONG 'BIG JOB' LOADER
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29

Circle No. 148 on Reader Inquiry Card

called Olympic. Co-developed by Pure-Seed Testing, Inc., and Rutgers University, Olympic has "a moderately dark green color." The new tall fescue displays improved resistance to leaf spot, brown patch, and crown rust. Emergence takes place in 6-10 days when seeded in late spring or early fall. It can be sown with Kentucky bluegrass to improve drought, heat and wear tolerance.

Circle No. 158 on Reader Inquiry Card

Growth regulator has expanded label

Maag, Inc., has announced Atrinal now includes use for abelia, eugenia, ficus, pittosporum, in addition to current species ivy, ligustrum, holly, and honeysuckle. The plants are cleared for Atrinal for landscape maintenance use. The product is also labelled for many nursery and greenhouse applications.

Circle No. 159 on Reader Inquiry Card

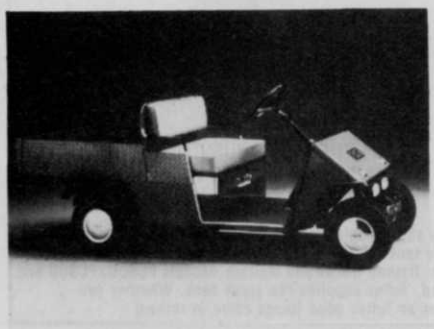
Finn redesigns B250 straw blower

Finn Corporation has totally redesigned its B250 blower to increase the capacity to blow low grade, tough hay or other vegetative mulch. The unit has a capacity of 25-ton-per-hour capacity with variable speed control. It is powered by a choice of six-cylinder diesel or gasoline engines.

Circle No. 163 on Reader Inquiry Card

E-Z-Go turf vehicle carries its weight

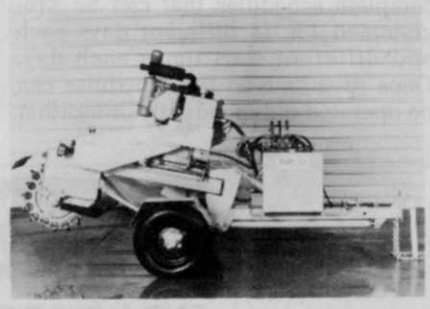
The 800-lbs. E-Z-Go GX-800 is a multi-use light turf vehicle. Available this month at distributors the unit has a tilting bed with a capacity of almost ten cubic feet, a zinc-oxide plating on the body to reduce rusting and chipping, and a 244 cc oil-injected engine with electronic ignition.



Circle No. 160 on Reader Inquiry Card

Stumps cut deeper, wider by new Rayco

Rayco has a new stump cutter, the RG 1637, designed for greater production and field life. The unit has a heavy duty power unit to produce a deeper and wider cut into the stump, a 48-in. telescoping cylinder to expand the working area without repositioning the towing vehicle, and cutting depth capacity increase to 18-in. below grade and super grip notch v-belts to minimize possible slippage of the drive train.



Circle No. 161 on Reader Inquiry Card

Rear vacuum added to Excel Hustler

Excel Industries now has available a vacuum attachment for its Model 261 outfront rotary mower. Designed for grass clippings and leaves, the Bac-Vac uses a 5-h.p. Briggs & Stratton engine for picking up 16 bushels of material at a time. To empty, the operator releases the contents by a lever as he drives forward.

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Circle No. 151 on Reader Inquiry Card

Sentinel Swans — The System that Keeps the Geese Away!

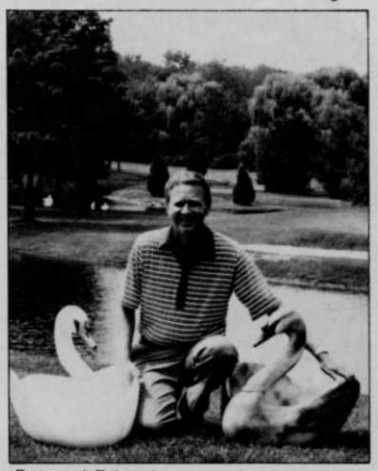
☐ Proven method for control of Canada Geese
☐ Perfected after years of field testing
☐ Uses life-size, life-like swan replicas
☐ Ready to float, no mountings needed

After five years of field testing at the Innis Arden Golf Club in Old Greenwich, Connecticut, Superintendent Pat Lucas introduces the *Sentinel Swan Family System* . . . . antidote to Canada Geese "Fowl Play".

The *Sentinel Swan Family System* works effectively for two reasons; the *System* devised by Pat Lucas and the utilization of swan replicas that are life-like, life-size, and *Natural* in appearance. Research bears out that Canada Geese are not easily fooled.

You've read about this new system in "Golf Course Management" and "Golf" magazines. The *Sentinel Swan Family System* makes the geese fly over, not fly down. Eliminates nasty geese problems — unhealthy droppings, packed mower rollers, feather-clogged irrigation suction strainers, dead turf, time-consuming cleanup, and golfer complaints.

Buy from the man who originated *The System That Keeps The Geese Away.* Call Pat if you have questions regarding your specific needs.



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WTT 92

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WT&T EVENTS

The current issue of WEEDS TREES & TURF carries meeting dates beginning with the following month. To insure that your event is included, please forward it, 90 days in advance, to: WEEDS TREES & TURF Events, 757 Third Ave., New York, NY 10017.

National Lawn and Garden Distributors Annual Convention, Fairmont Tower, San Francisco, CA, **Sept. 12-15.** Contact Nancy Irving 1900 Arch St. Philadelphia, PA, 215/564-3484.

Virginia Turfgrass Research Field Days, Virginia Tech, Blacksburg, VA, **Sept. 14-16.** Contact J.R. Hall, Agronomy Dept. Blacksburg, VA 24061, 703/961-5797.

Understanding Weeds (A Practical Course on the Biology of Weeds) Purdue University, West Lafayette, IN, **Sept. 12-17.** Contact G.F. Warren, 1130 Cherry Lane, West Lafayette, IN 47906, 317/463-1130.

Texas Turfgrass Field Day, Texas A&M Field Laboratory, **September 22.** Contact Dr. James Beard, Department of Soil and Crop Sciences, Texas A&M University College Station, TX 77843, 713/845-3041.

Northwest Turfgrass Conference, Washington Conference Center, Yakima, WA, **Sept. 20-23.** Contact Roy Goss, Washington State University, Puyallup, WA 98371, 206/593-8513.

Midwest Turf Field Field Days, Purdue University, West Lafayette, IN, **Sept. 27-28.** Contact W.H. Daniel, Dept. of Agronomy, Purdue University, West Lafayette, IN 47907, 317/494-4785.

International Pesticide Applicators Association Annual Convention, Holiday Inn, Seattle, WA, **Sept. 29-Oct. 1.** Contact Pete Tovoli 4202-11th NW, Puyallup, WA 98371, 206/848-3407.

Golf Course Superintendents Association of New Jersey Annual Turfgrass Equipment, Irrigation and Supplies Field Day, Rutgers University, **Oct. 5.** Contact Dr. Henry Indyk, Soils and Crops Department, Cook College Rutgers University, Box 231, New Brunswick, NJ 08903, 201/932-9453.

Turfgrass Fertilization Symposium, Columbus, OH, **Oct. 20-21.** Contact Dr. B.G. Joyner, Plant Diagnostic Lab, Chemlawn, 6969 Worthington-Galena Rd. Suite L Worthington, OH 43085, 614/885-9588.

Nebraska Arborists School, Omaha, NE, **Oct. 25-29** Contact Dave Mooter, Nebraska Forest Service, 8015 West Center Rd. Omaha, NE 68124, 402/444-7804.

Atlantic Seedsmen Association Annual Convention, Fort Magruder Inn, Williamsburg, VA, **Nov. 3-5.** Contact Margaret Herbst, 230 Park Avenue, New York, NY 10017, 212/685-5917.

NY State Turfgrass Association Conference and Trade Show, Rochester, NY, **Nov. 9-11.** Contact Ann Reilly, 210 Cartwright Boulevard, Massapequa Park, NY 11762, 516/541-6902.

Herbicide Action Course, Purdue University, West Lafeyette, IN. **Oct. 31-Nov. 5 and Nov. 7-12.** Contact G.F. Warren 1130 Cherry Lane, West Lafayette, IN. 47906, 317/463-1130.

California Landscape Contractors Association Annual Convention, Hawaii, **Nov. 10-14.** Contact CLCA, 916/448-CLCA

CAN Horticultural Tour of Australia, Oct. 25-Nov. 16. Contact Elaine Thompson, California Association of Nurserymen, 1419 21st St. Sacramento, CA 916/448-2881.

8th Annual Professional Landscape Management School, Indiana State University, Evansville, **Nov. 16-17.** Contact Allen Boger, Room 202, City-County Building, Evansville, IN 47708, 812/426-5287.

Professional Lawn Care Association of America's 3rd Annual Convention and Trade Show, Indiana Convention Exposition Center, **Nov. 16-18.** Contact Jane Stecker, 435 North Michigan Ave., Suite 1717, Chicago, IL 60611 312/644-0828.

Professional Grounds Management Society National Conference, Vacation Village Hotel, San Diego, CA, **Nov. 16-18.** Contact Michael Silberhorn, 7 Church Lane, Pikesville, MD 21208 301/653-2742.

American Society of Landscape Architects Annual Meeting, Hilton Hawaiian Village, Honolulu, HI, **Nov. 20-23.** Contact Ed Able, ASLA, 1733 Connecticut Avenue, NW, Washington, DC 20009, 202/466-7730.

21st Annual North Carolina Turfgrass Conference, Pinehurst Hotel, Southern Pines, NC, **Jan. 4-6.** Contact L.T. Lucas, 3409 Gardner Hall, N.C. State University, Raleigh, NC 27650, 919/737-2751.

21st Nebraska Turfgrass Conference and Trade Show, Holiday Inn, Omaha, NB **Jan. 11-13.** Robert Shearman, 377 Plant Science Complex, University of Nebraska, Lincoln, NB 68583, 402/472-2550.

Golf Course Superintendents Association of America 54th International Turfgrass Show, Georgia World Congress Center, Atlanta, GA, **Feb. 22-24.** Contact Kay Nelson, 1617 St. Andrews Drive, Lawrence, KS 66044, 913/841-2240.

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WT&T

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WANT TO BUY OR SELL a golf course? Exclusively golf course transactions and appraisals. Ask for our catalog. McKay Golf and Country Club Properties, 15553 N. East Street, Lansing, Michigan 48906. Phone (517) 484-7726. TF

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USED EQUIPMENT

For Sale—Sod harvesters, 1977 Princeton tow boy sod harvester, model 4020 with trailer and 1979 Princeton self-propelled, model 4020 diesel. Contact Circle Acceptance Leasing Corporation, Columbus, OH. (614) 890-5040. Ask for Mike or Joel. 9/82

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1,250-gallon stainless steel tanks. Mechanical agitation. FMC 20 gallon/minute pump. Hanney electric reel. Ford F600 and Chevy C60's—'76's, '77's, '78's and '79's.

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104	Bunton Co.	43
105	Champion Sprinkler Equipment	65
225	Chevron Chemical Co.	81
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108	Cushman Turf	60 & 61
109	Ditch Witch	39
110	Dow Chemical U.S.A.	CV II & pg 1
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112	Estech, Inc.	82
113	Excel Industries	62
114	Polaris E-Z-Go	45
115	Garfield Williamson, Inc.	3
116	The Grasshopper Co.	49
117	Hoffco, Inc.	19
118	Hypro	66
119	International Seed, Inc.	26
224	Jacklin Seed Co.	11
121	Jacobsen	51
122	F.D. Kees Mfg. Co.	96
123	Kubota Tractors	5
124	Kut-Kwick	67
125	Lakeshore Equipment & Supply Co.	52 & 53
126	Lofts Seed Inc.	CV IV
127	Mallinckrodt, Inc.	74
128	Mathews Co.	20
129	Milwaukee Metro Sewerage Dist.	77
130	Mobay Chemical Corp.	12 & 13
131	Monsanto Agricultural Products	79
132	Mott Corp.	69
133	National Mower Co.	15
134	Northrup King Co.	21
135	Olathe Mfg. Inc.	22
136	Oregon Ryegrass Commission	95
	PGMS	98
	PLCAA	41
137	Power Lawn Parts	35
138	Prentis Drug & Chemical Co.	101
139	Ransomes, Inc.	71
140	Ryan Turf Care Equipment	7
141	O.M. Scott & Sons Co.	32 & 33
142	Sentinel Swans	100
143	Solo Inc.	55
144	Spraying Systems Co.	95
145	Stauffer Chemical	9
146	Toro Co.	73
147	Toro Irrigation	31
148	Tuflex Mfg. Co.	97
149	Turf Seed Inc .	93
150	Vermeer Mfg. Co.	46 & 47
151	Woods, Div. of Hesston Corp.	99

NEW PRODUCTS

Reader Service Number		Page No.
159	Maag, Inc.	98
160	Polaris E-Z-Go	98
161	Rayco	98
162	Excel Industries	98
163	Finn Corp.	98

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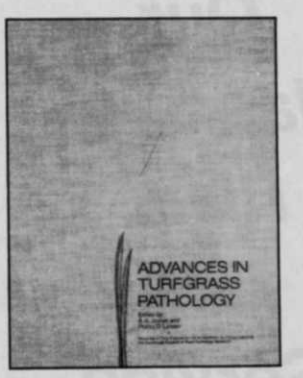

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